

Assignment No: 01

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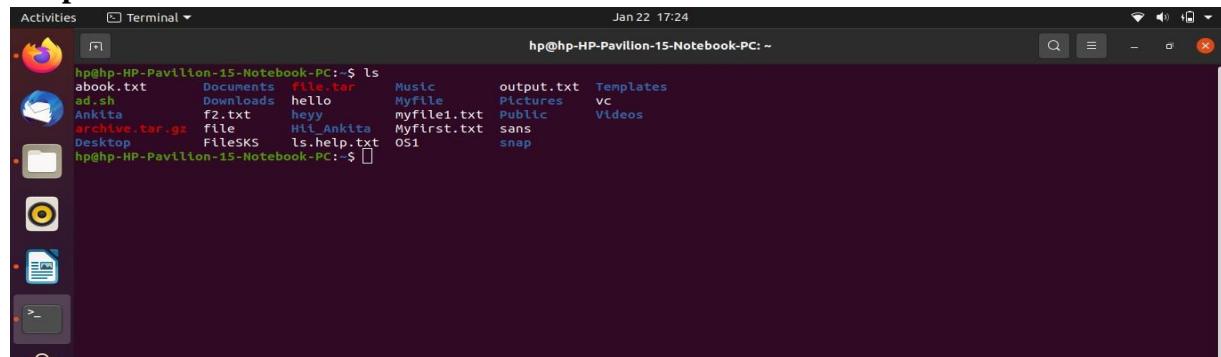
Roll No: 333065

Prn No: 22120132

Class: TY-C

- 1) **Ls** - The most frequently used command in Linux to list directories.

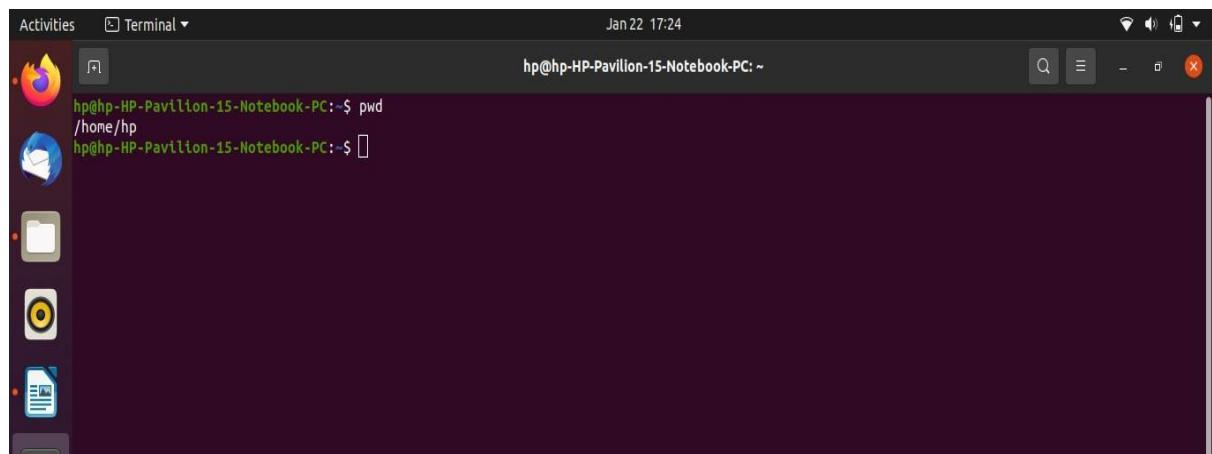
Output:-



```
hp@hp-HP-Pavilion-15-Notebook-PC:~$ ls
abook.txt      Documents  file.tar    Music      output.txt  Templates
ed.sh          Downloads  hello       Myfile    Pictures    VC
Ankita         f2.txt     hey        myfile1.txt Public    Videos
archive.tar.gz file      H1_Ankita  Myfirst.txt sans
Desktop        FileSKS   ls.help.txt OS1      snap
hp@hp-HP-Pavilion-15-Notebook-PC:~$
```

- 2) **pwd** — Print working directory command in Linux

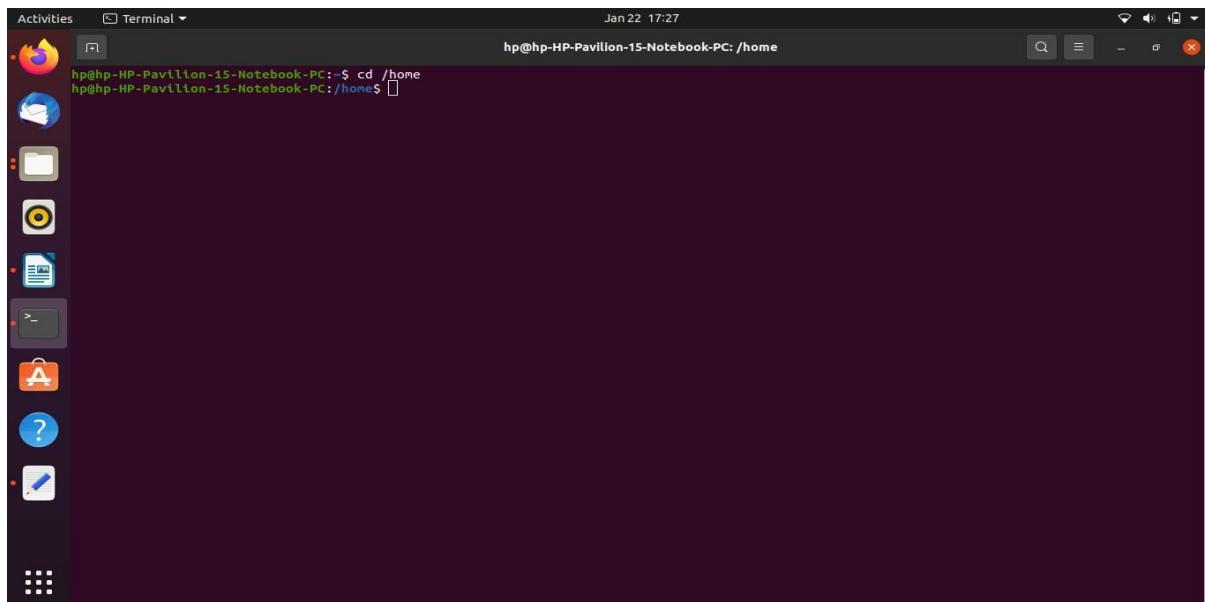
Output:-



```
hp@hp-HP-Pavilion-15-Notebook-PC:~$ pwd
/home/hp
hp@hp-HP-Pavilion-15-Notebook-PC:~$
```

3) **cd** — Linux command to navigate through directories.

Output:-

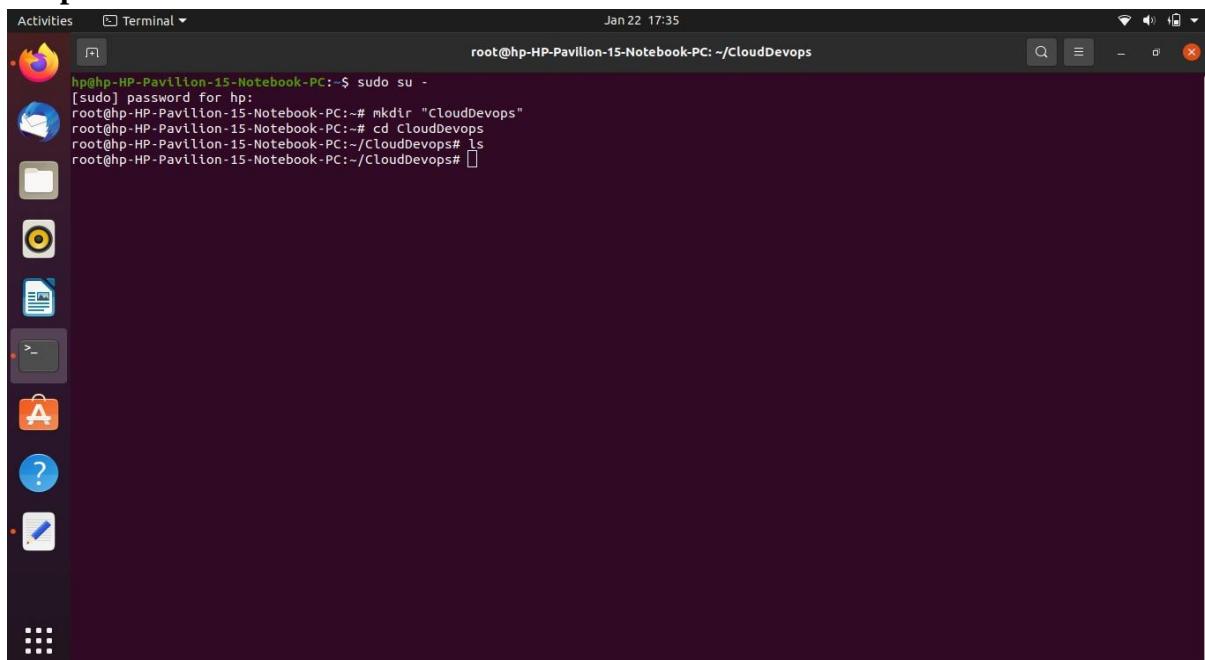


A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "Terminal" and the status bar shows "Jan 22 17:27". The terminal content is:

```
Activities Terminal Jan 22 17:27
hp@hp-HP-Pavilion-15-Notebook-PC:~$ cd /home
hp@hp-HP-Pavilion-15-Notebook-PC:/home$
```

4) **mkdir** — Command used to create directories in Linux

Output:-

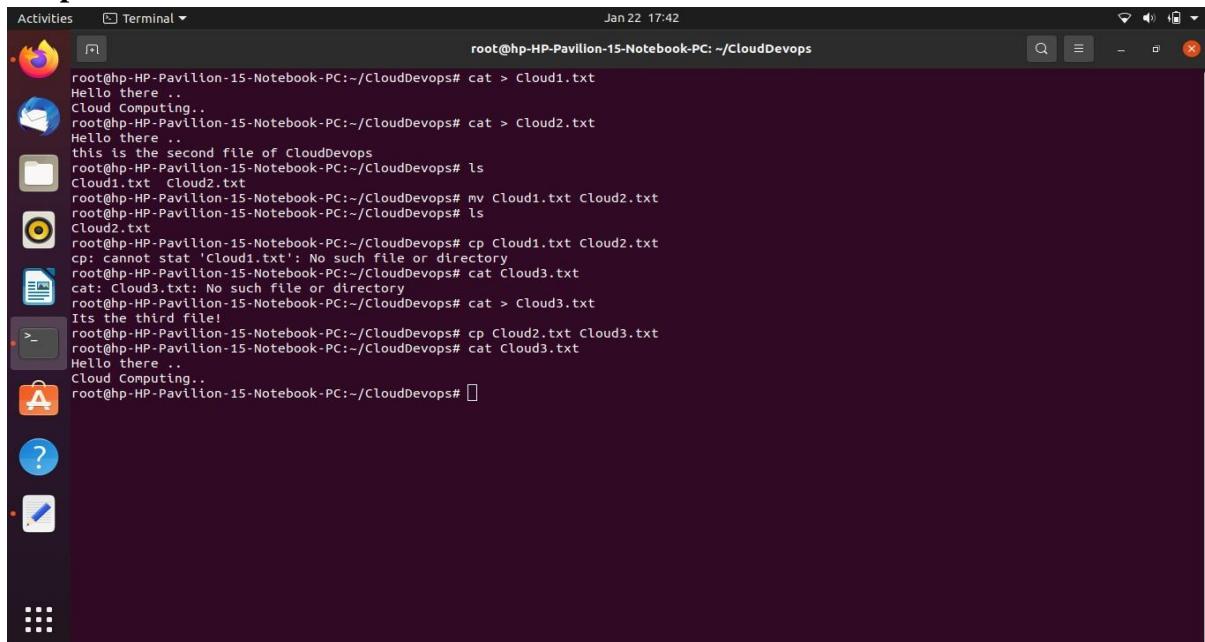


A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "Terminal" and the status bar shows "Jan 22 17:35". The terminal content is:

```
Activities Terminal Jan 22 17:35
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops$ hp@hp-HP-Pavilion-15-Notebook-PC:~$ sudo su -
[sudo] password for hp:
root@hp-HP-Pavilion-15-Notebook-PC:~# mkdir "CloudDevops"
root@hp-HP-Pavilion-15-Notebook-PC:~# cd CloudDevops
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

5) mv — Move or rename files in Linux

Output:-



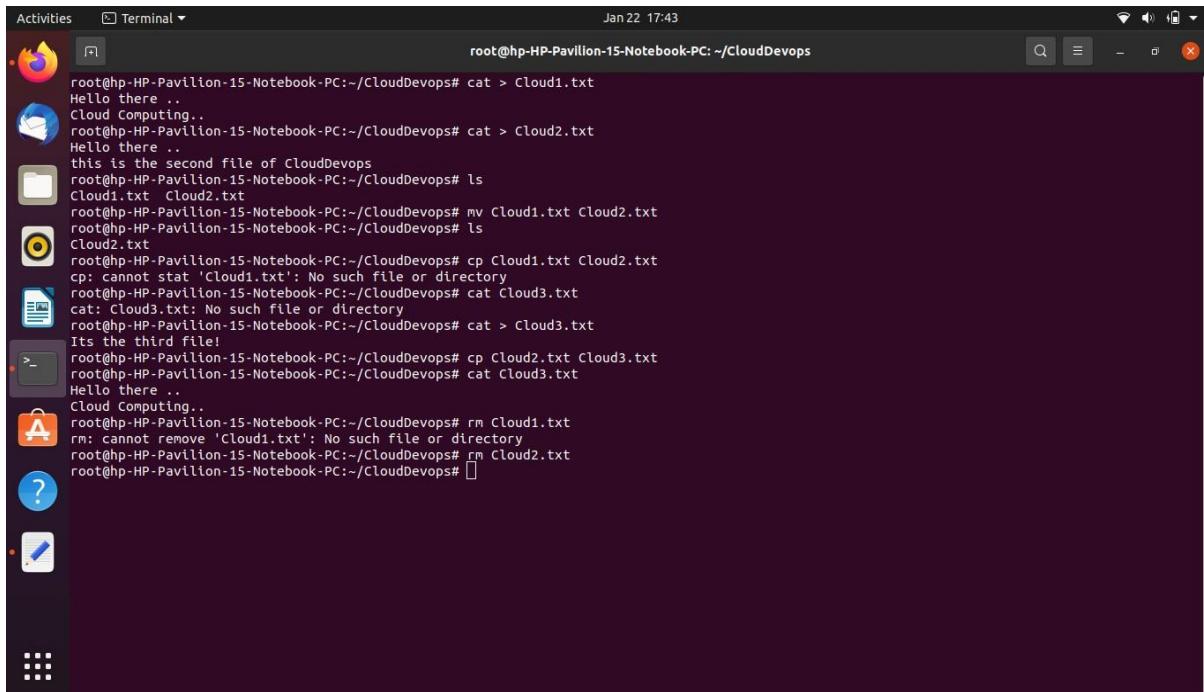
A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal content shows the following session:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud1.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud2.txt
Hello there ..
this is the second file of CloudDevops
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud1.txt Cloud2.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# mv Cloud1.txt Cloud2.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud2.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cp Cloud1.txt Cloud2.txt
cp: cannot stat 'Cloud1.txt': No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud3.txt
cat: Cloud3.txt: No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud3.txt
Its the third file!
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cp Cloud2.txt Cloud3.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud3.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

6) cp — Similar usage as mv but for copying files in Linux

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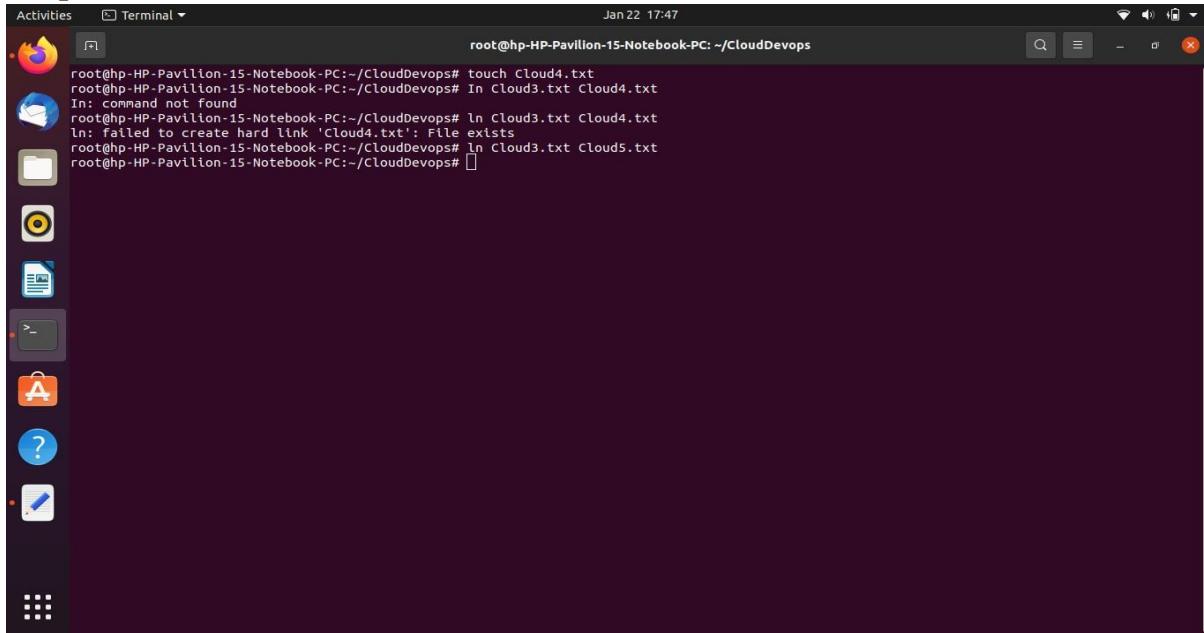
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud1.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud2.txt
Hello there ..
this is the second file of CloudDevops
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud1.txt Cloud2.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# mv Cloud1.txt Cloud2.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud2.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cp Cloud1.txt Cloud2.txt
cp: cannot stat 'Cloud1.txt': No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud3.txt
cat: Cloud3.txt: No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud3.txt
Its the third file!
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cp Cloud2.txt Cloud3.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud3.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# rm Cloud1.txt
rm: cannot remove 'Cloud1.txt': No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# rm Cloud2.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

7) **rm** — Delete files or directories

Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# touch Cloud4.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud4.txt
ln: command not found
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud4.txt
ln: failed to create hard link 'Cloud4.txt': File exists
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

8) **touch** — Create blank/empty files

Output:-

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```
Activities Terminal ▾ Jan 22 17:48
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# touch Cloud4.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud4.txt
ln: command not found
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud4.txt
ln: failed to create hard link 'Cloud4.txt': File exists
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

9) **ln** — Create symbolic links (shortcuts) to other files

Output:-

```
Activities Terminal Jan 22 17:48 root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# touch Cloud4.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# In Cloud3.txt Cloud4.txt
In: command not found
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud4.txt
ln: failed to create hard link 'Cloud4.txt': File exists
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# clear
```

10) **cat** — Display file contents on the terminal

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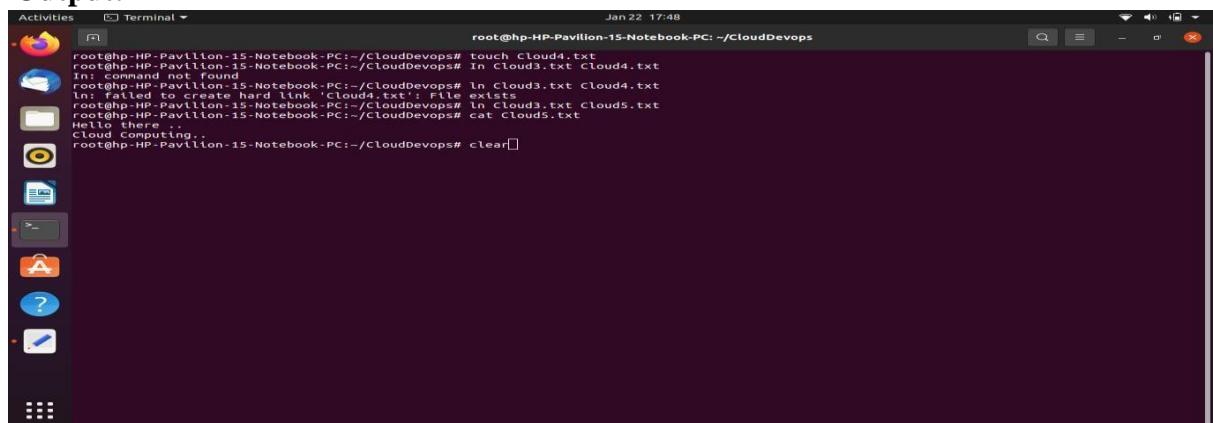
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# touch Cloud4.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud4.txt
ln: failed to create hard link 'Cloud4.txt': File exists
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# clear
```

11) **clear** — Clear the terminal display

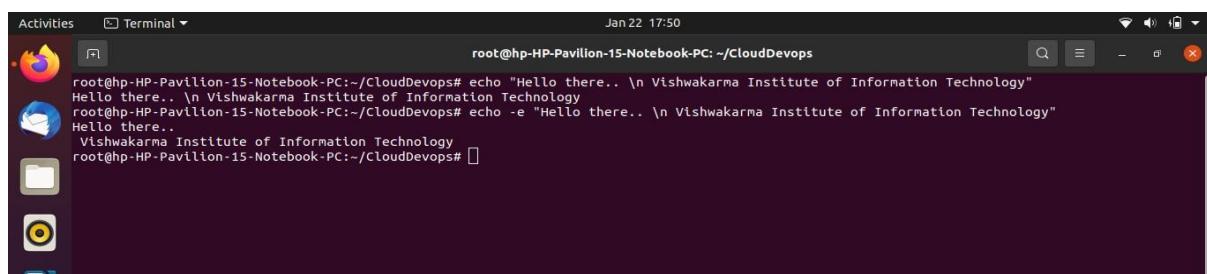
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# touch Cloud4.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud4.txt
ln: failed to create hard link 'Cloud4.txt': File exists
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ln Cloud3.txt Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud5.txt
Hello there..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# clear
```

12) **echo** — Print any text that follows the command

Output:-

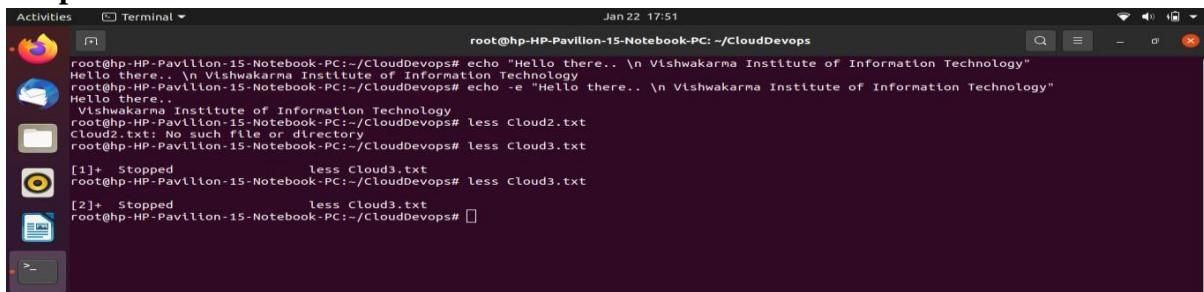


```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# echo "Hello there.. \n Vishwakarma Institute of Information Technology"
Hello there.. \n Vishwakarma Institute of Information Technology
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# echo -e "Hello there.. \n Vishwakarma Institute of Information Technology"
Hello there..
Vishwakarma Institute of Information Technology
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

13) **less** — Linux command to display paged outputs in the terminal

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Output:-

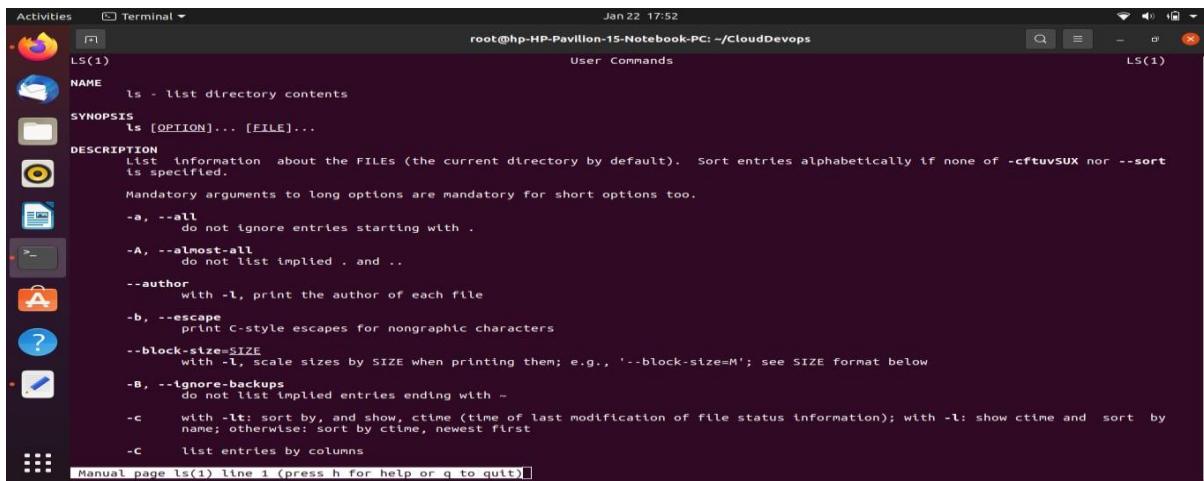


A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "Terminal". The terminal content shows the following session:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# echo "Hello there.. \n Vishwakarma Institute of Information Technology"
Hello there..
Vishwakarma Institute of Information Technology
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# echo -e "Hello there.. \n Vishwakarma Institute of Information Technology"
Hello there..
Vishwakarma Institute of Information Technology
root@hp-HP-Pavillon-15-Notebook-PC:~/CloudDevops# less Cloud2.txt
Cloud2.txt: No such file or directory
root@hp-HP-Pavillon-15-Notebook-PC:~/CloudDevops# less Cloud3.txt
[1]+  Stopped                  less Cloud3.txt
root@hp-HP-Pavillon-15-Notebook-PC:~/CloudDevops# less Cloud3.txt
[2]+  Stopped                  less Cloud3.txt
root@hp-HP-Pavillon-15-Notebook-PC:~/CloudDevops#
```

14) **man** — Access manual pages for all Linux commands

Output:-



A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "Terminal". The terminal content shows the following session:

```
root@hp-HP-Pavillon-15-Notebook-PC:~/CloudDevops# man ls(1)
LS(1)                                         User Commands                                         LS(1)

NAME
    ls - list directory contents

SYNOPSIS
    ls [OPTION]... [FILE]...

DESCRIPTION
    List information about the FILES (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

    Mandatory arguments to long options are mandatory for short options too.

    -a, --all
        do not ignore entries starting with .

    -A, --almost-all
        do not list implied . and ..

    --author
        with -l, print the author of each file

    -b, --escape
        print C-style escapes for nongraphic characters

    --block-size=SIZE
        with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M'; see SIZE format below

    -B, --ignore-backups
        do not list implied entries ending with ~

    -c
        with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first

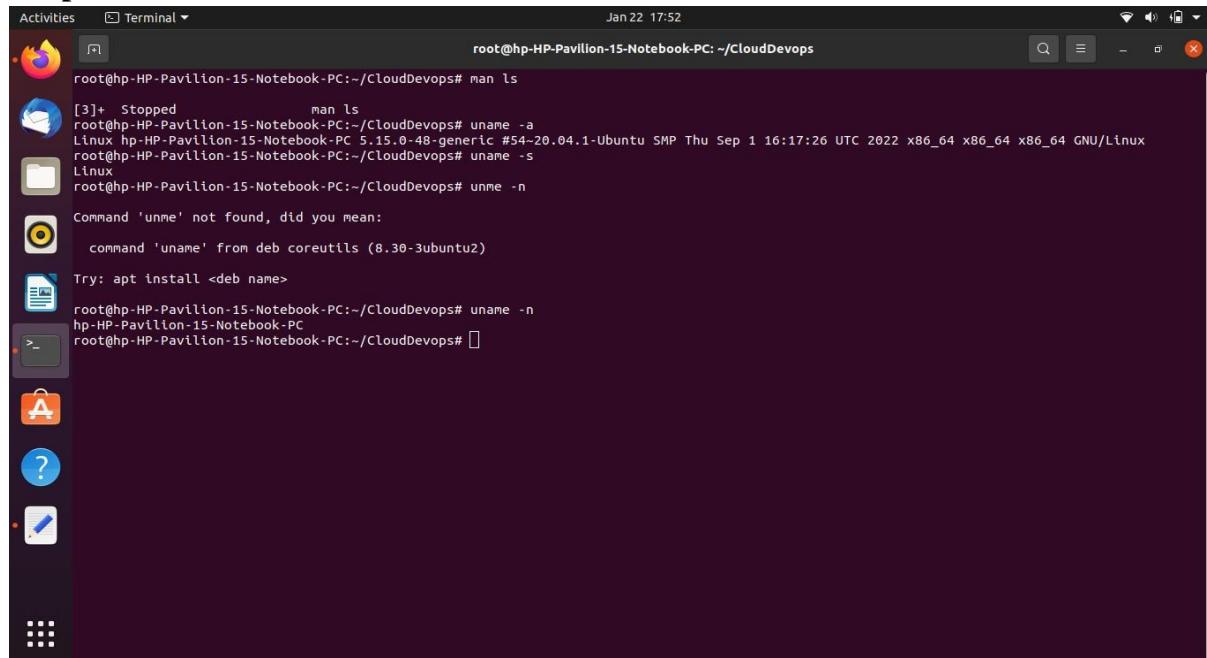
    -C
        list entries by columns

Manual page ls(1) line 1 (press h for help or q to quit)
```

15) **uname** — Linux command to get basic information about the OS.

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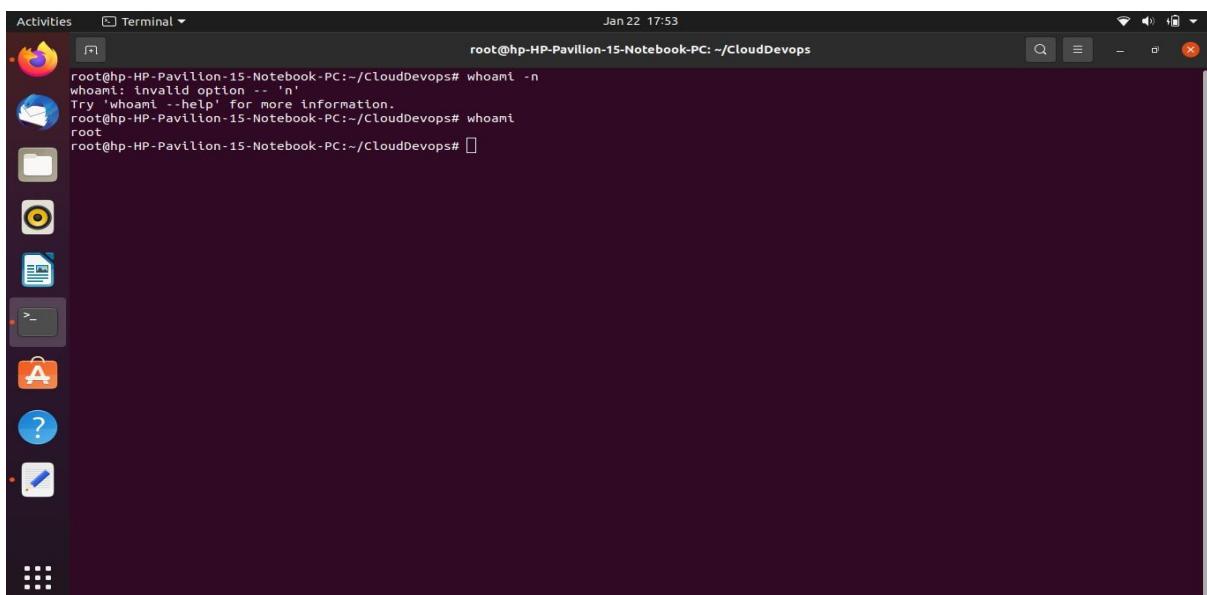
Output:-



```
Activities Terminal Jan 22 17:52
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# man ls
[3]+ Stopped man ls
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# uname -a
Linux hp-HP-Pavilion-15-Notebook-PC 5.15.0-48-generic #54~20.04.1-Ubuntu SMP Thu Sep 1 16:17:26 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# uname -s
Linux
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# uname -n
Command 'uname' not found, did you mean:
  command 'uname' from deb coreutils (8.30-3ubuntu2)
Try: apt install <deb name>
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# uname -n
hp-HP-Pavilion-15-Notebook-PC
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

16) **whoami** — Get the active username

Output:-

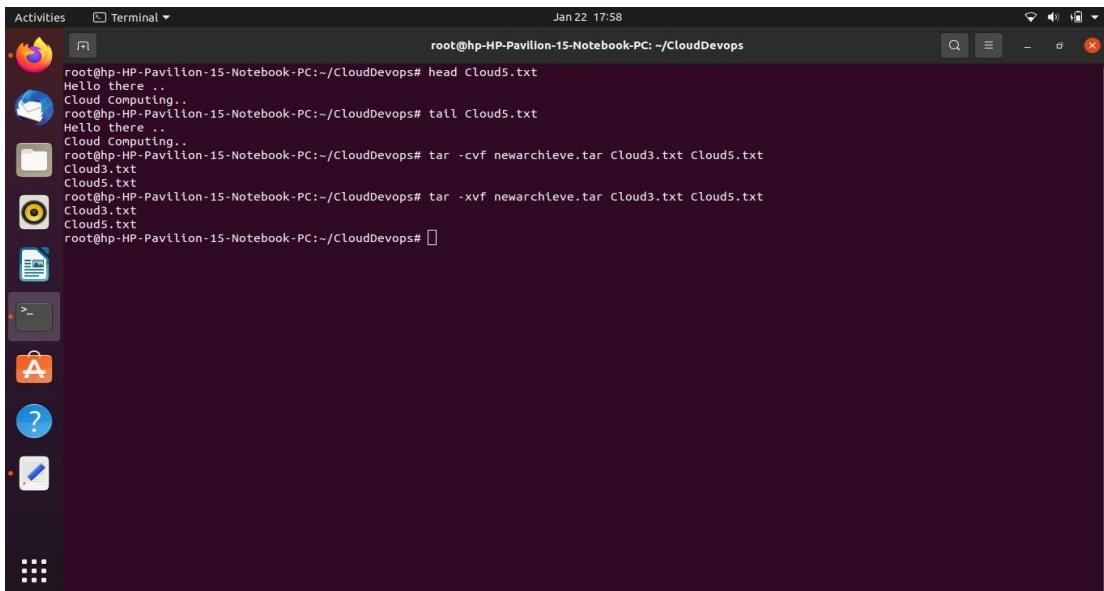


```
Activities Terminal Jan 22 17:53
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# whoami -n
whoami: invalid option -- 'n'
Try 'whoami --help' for more information.
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# whoami
root
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

Cloud Computing and DevOps

17) **tar** — Command to extract and compress files in Linux

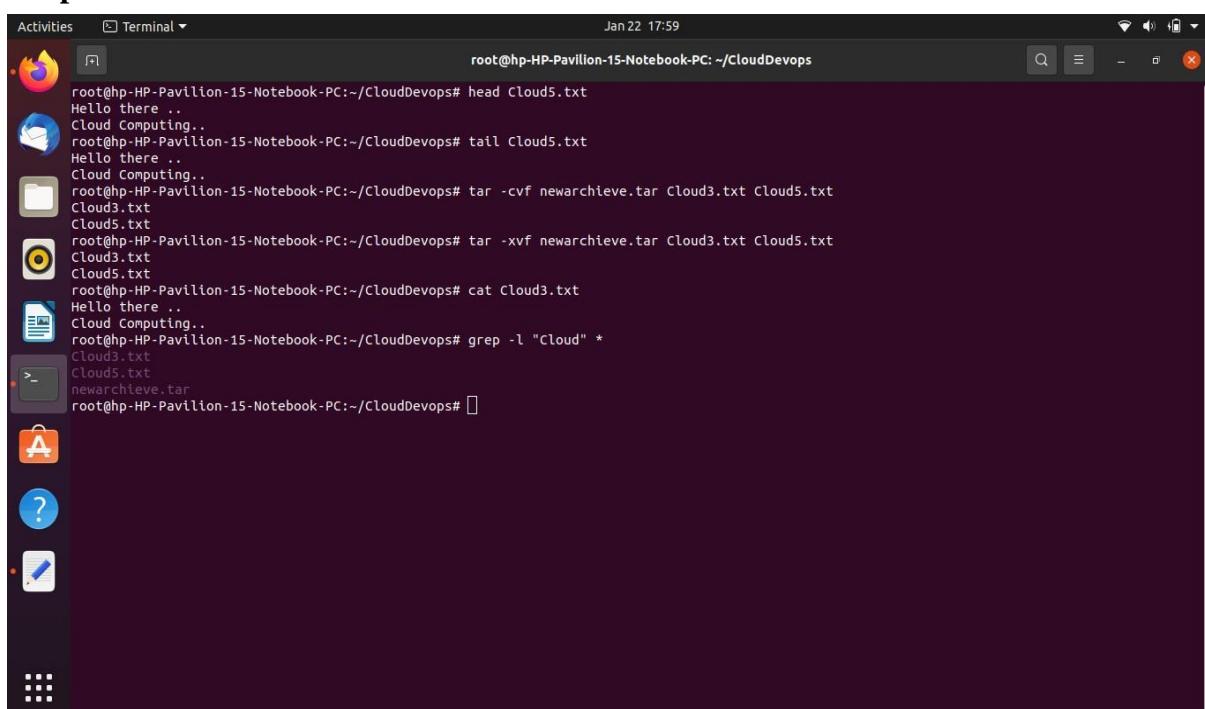
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# head Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# tail Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# tar -cvf newarchive.tar Cloud3.txt Cloud5.txt
Cloud3.txt
Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# tar -xvf newarchive.tar Cloud3.txt Cloud5.txt
Cloud3.txt
Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

18) **grep** — Search for a string within an output

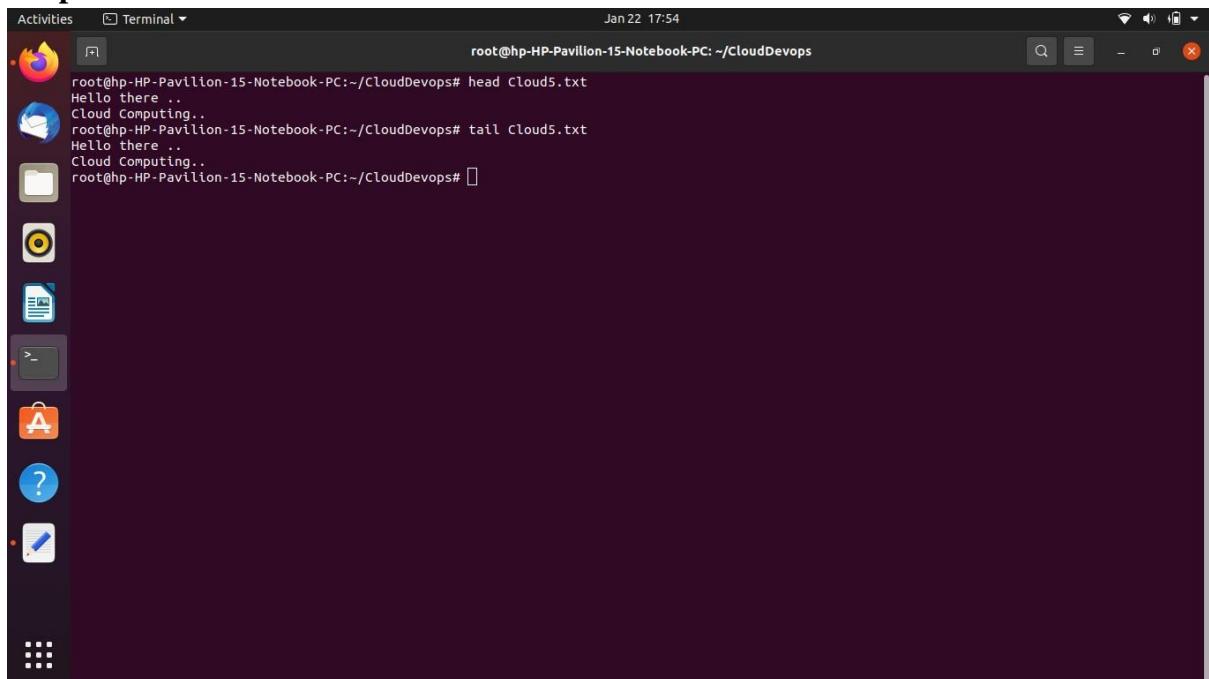
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# head Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# tail Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# tar -cvf newarchive.tar Cloud3.txt Cloud5.txt
Cloud3.txt
Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# tar -xvf newarchive.tar Cloud3.txt Cloud5.txt
Cloud3.txt
Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud3.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# grep -l "Cloud" *
Cloud3.txt
Cloud5.txt
newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

19) **head** — Return the specified number of lines from the top

Output:-



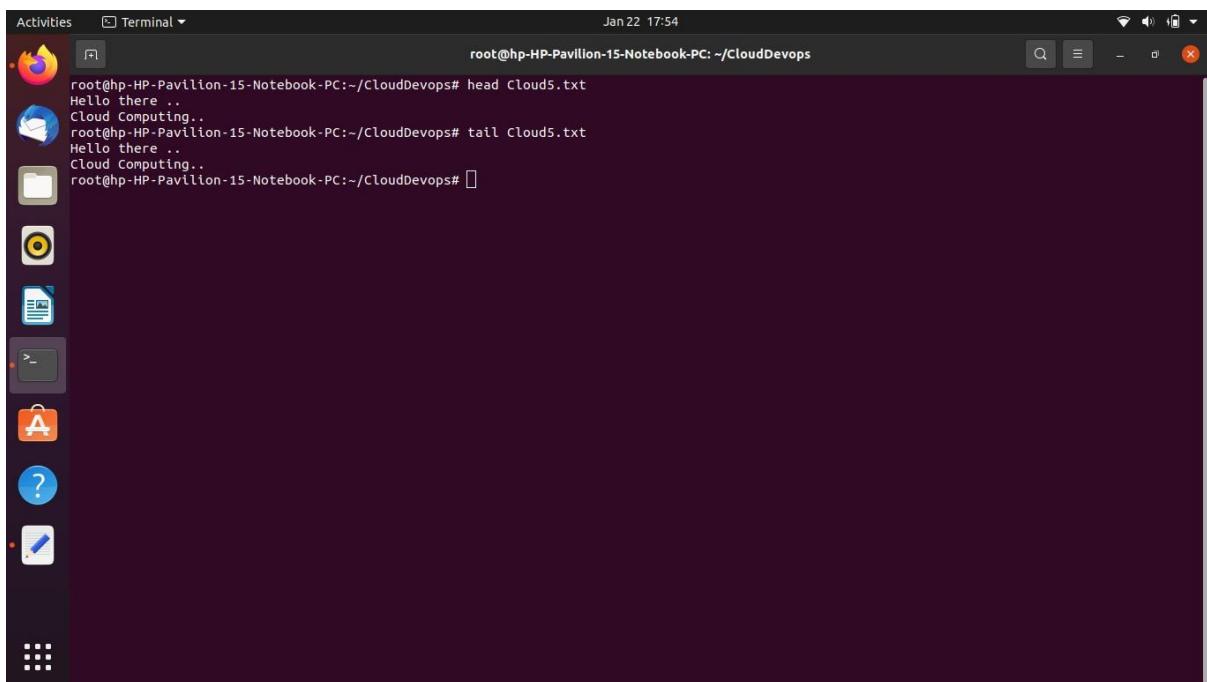
A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal content shows the execution of the "head" command on a file named "Cloud5.txt". The output of the command is "Hello there .. Cloud Computing..". Below the terminal window, a vertical dock contains icons for various applications like a browser, file manager, terminal, and system settings.

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# head Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# tail Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

20) **tail** — Return the specified number of lines from the bottom

Output:-

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A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "Terminal". The terminal window has a dark background and displays the following command-line session:

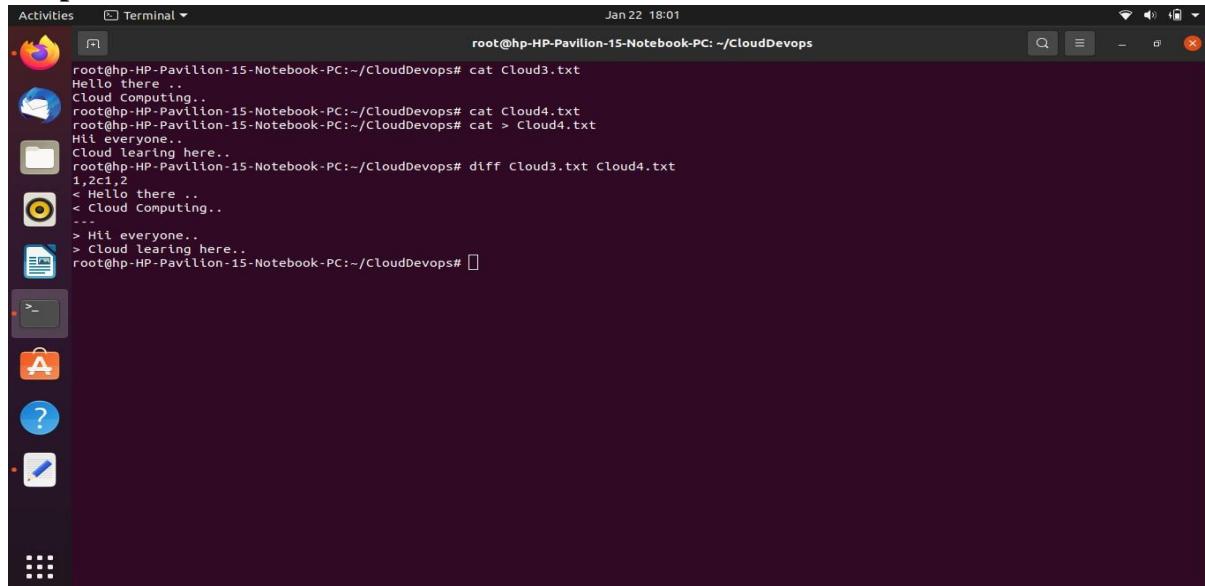
```
root@hp-HP-Pavilion-i5-Notebook-PC:~/CloudDevops# head Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-i5-Notebook-PC:~/CloudDevops# tail Cloud5.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-i5-Notebook-PC:~/CloudDevops#
```

The terminal window is located in the top right corner of the screen. On the left side, there is a vertical dock with various application icons, including a browser, file manager, terminal, and system settings. The desktop background is a solid light color.

Cloud Computing and DevOps

21) **diff** — Find the difference between two files

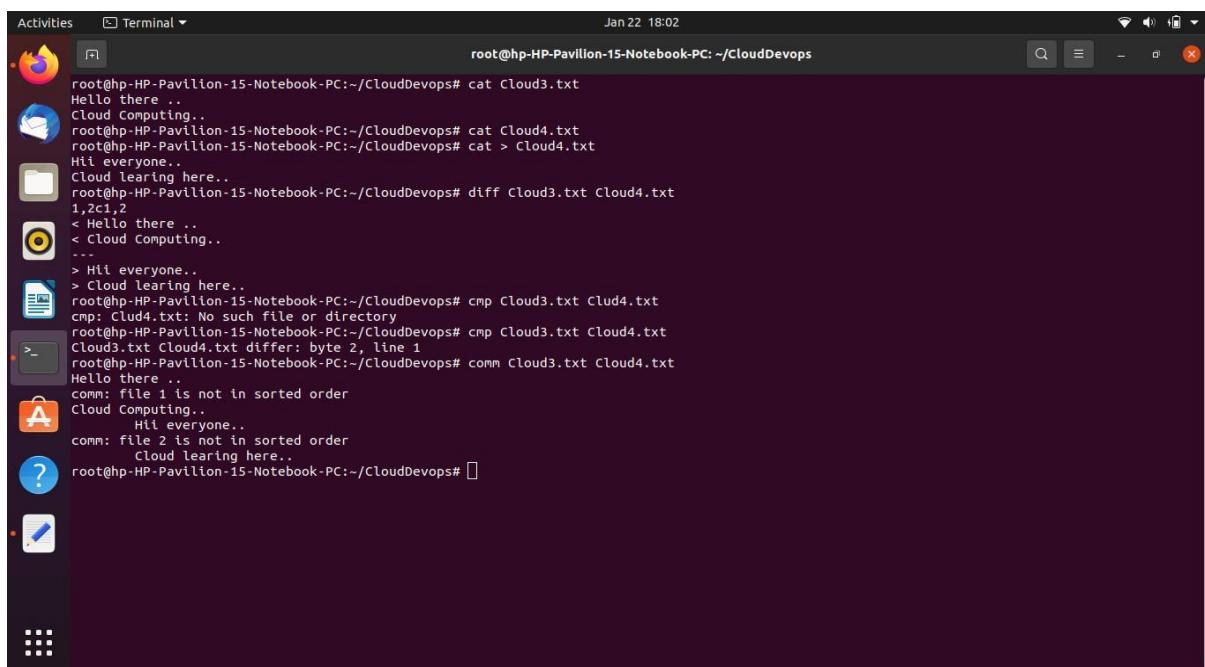
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud3.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud4.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud4.txt
Hi everyone..
Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# diff Cloud3.txt Cloud4.txt
1,2ci,2
< Hello there ..
< Cloud Computing..
...
> Hi everyone..
> Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

22) **cmp** — Allows you to check if two files are identical

Output:-

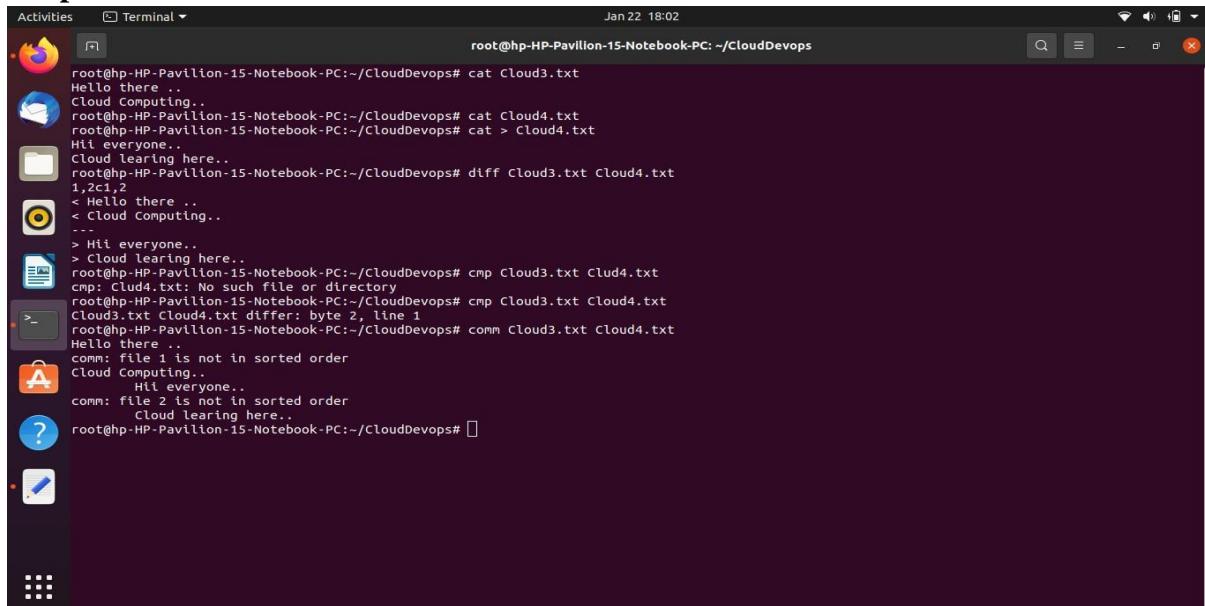


```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud3.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud4.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud4.txt
Hi everyone..
Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# diff Cloud3.txt Cloud4.txt
1,2ci,2
< Hello there ..
< Cloud Computing..
...
> Hi everyone..
> Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cmp Cloud3.txt Clud4.txt
cmp: Clud4.txt: No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cmp Cloud3.txt Cloud4.txt
Cloud3.txt cloud4.txt differ: byte 2, line 1
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# comm Cloud3.txt Cloud4.txt
Hello there ..
comm: file 1 is not in sorted order
Cloud Computing..
    Hi everyone..
comm: file 2 is not in sorted order
    Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

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23) **comm** Combines the functionality of diff and cmp.

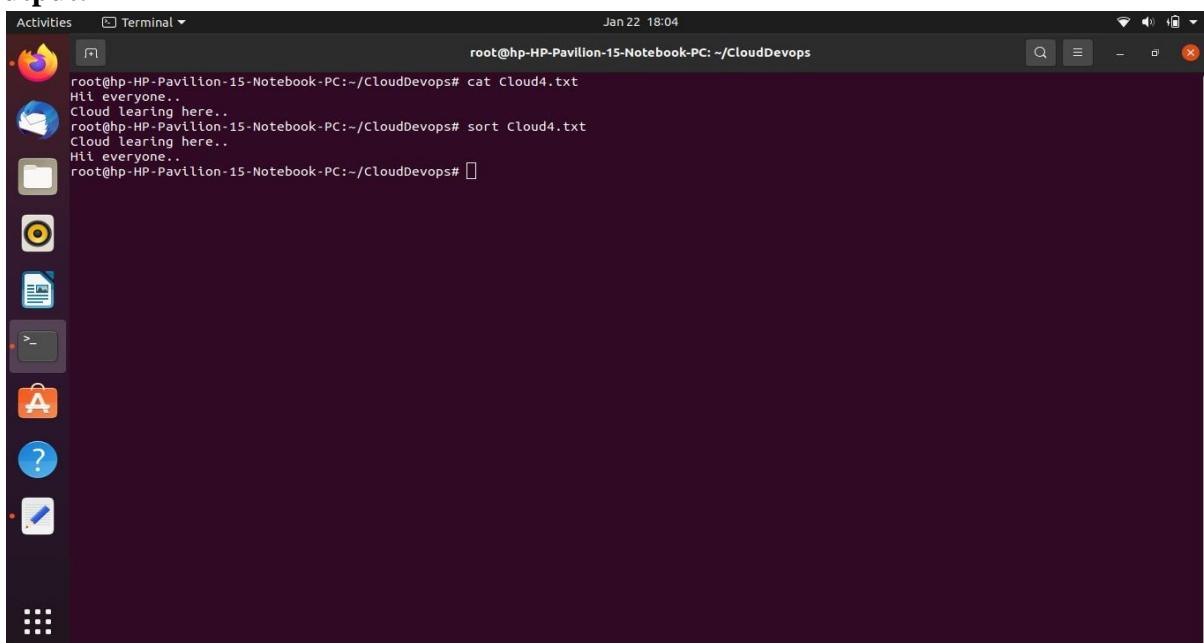
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud3.txt
Hello there ..
Cloud Computing..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud4.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat > Cloud4.txt
Hi everyone..
Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# diff Cloud3.txt Cloud4.txt
1,2c1,2
< Hello there ..
< Cloud Computing..
---
> Hi everyone..
> Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cmp Cloud3.txt Clud4.txt
cmp: Clud4.txt: No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cmp Cloud3.txt Cloud4.txt
Cloud3.txt Cloud4.txt differ: byte 2, line 1
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# comm Cloud3.txt Cloud4.txt
Hello there ..
comm: file 1 is not in sorted order
Cloud Computing..
      Hi everyone..
comm: file 2 is not in sorted order
      Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

24) **sort** — Linux command to sort the content of a file while outputting

Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat Cloud4.txt
Hi everyone..
Cloud learing here..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# sort Cloud4.txt
Cloud learing here..
Hi everyone..
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

Cloud Computing and DevOps

25)export Export environment variables in Linux

Output:-

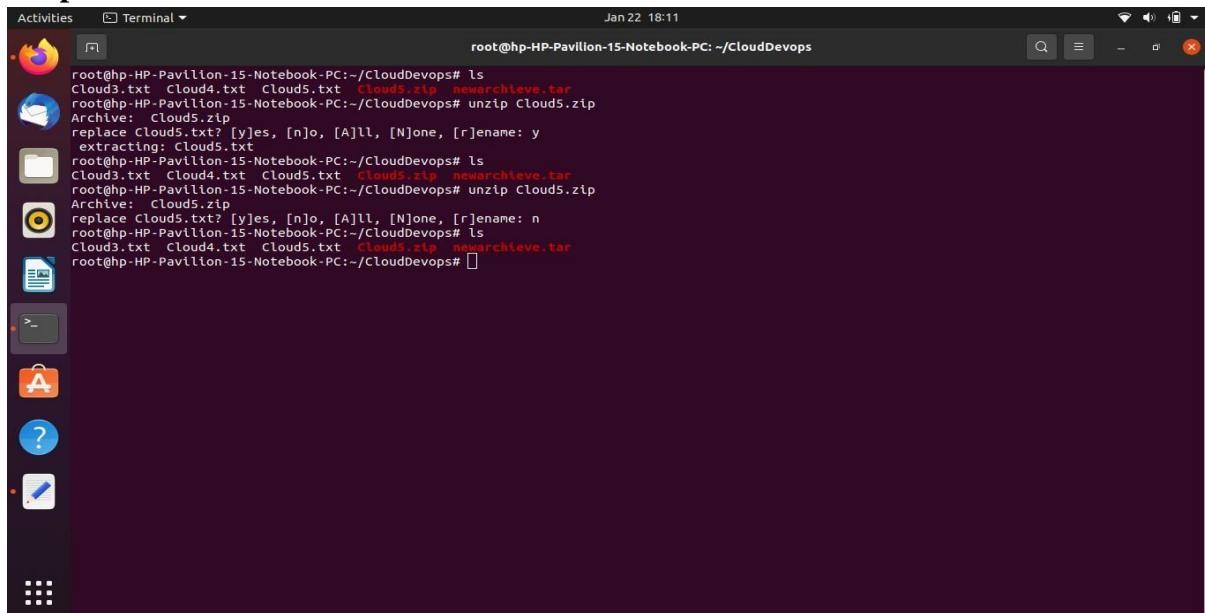
26) **zip** — Zip files in Linux

Output:-

```
Activities Terminal ▾ Jan 22 18:11
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud3.txt Cloud4.txt Clouds.txt Clouds.zip newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# unzip Clouds.zip
Archive: Clouds.zip
replace Clouds.txt? [y/N]o, [A]ll, [N]one, [r]ename: y
extracting: Clouds.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud3.txt Cloud4.txt Clouds.txt Clouds.zip newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# rm Clouds.zip
Archive: Clouds.zip
replace Clouds.txt? [y/N]o, [A]ll, [N]one, [r]ename: n
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud3.txt Cloud4.txt Clouds.txt Clouds.zip newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

27)unzip Unzip files in Linux

Output:-

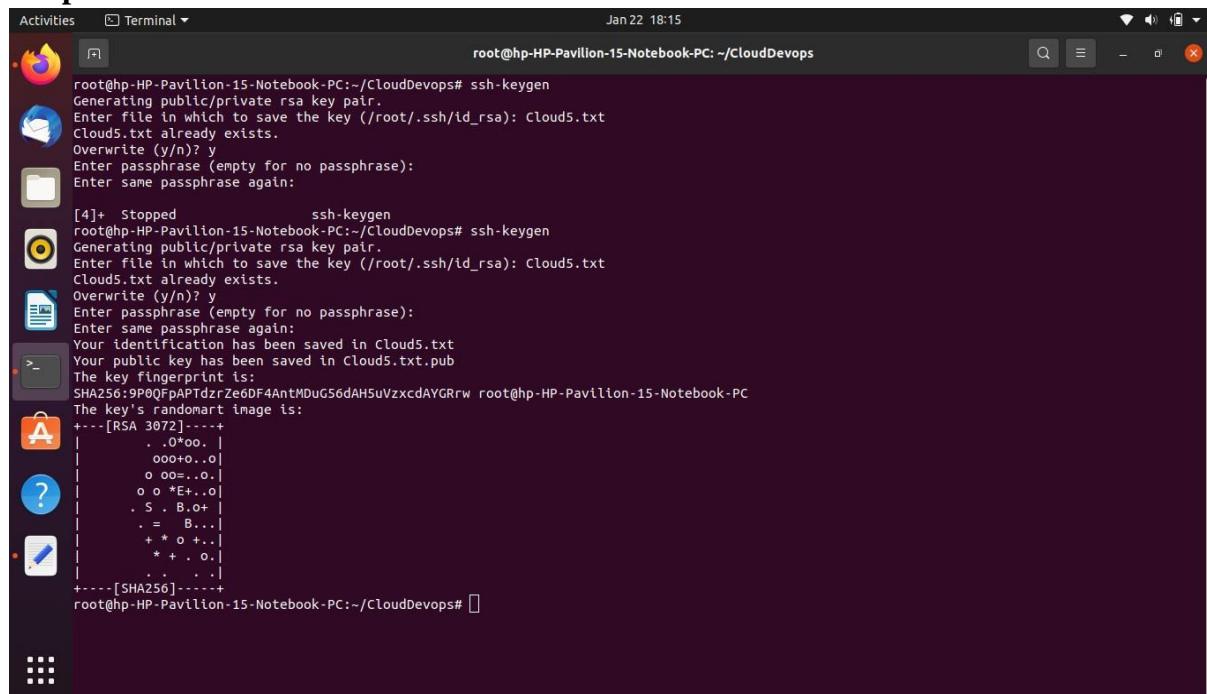


A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal content shows the execution of the "unzip" command on a file named "Cloud5.zip". The output indicates that the file "Clouds.txt" was extracted from the archive. The terminal window is part of a desktop interface with a dock on the left containing icons for various applications like a browser, file manager, and terminal.

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud3.txt Cloud4.txt Cloud5.txt Clouds.zip newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# unzip Cloud5.zip
Archive: Cloud5.zip
replace Clouds.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
extracting: Clouds.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud3.txt Cloud4.txt Cloud5.txt Clouds.zip newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# unzip Cloud5.zip
Archive: Cloud5.zip
replace Clouds.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: n
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls
Cloud3.txt Cloud4.txt Cloud5.txt Clouds.zip newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# 
```

28) ssh — Secure Shell command in Linux

Output:-



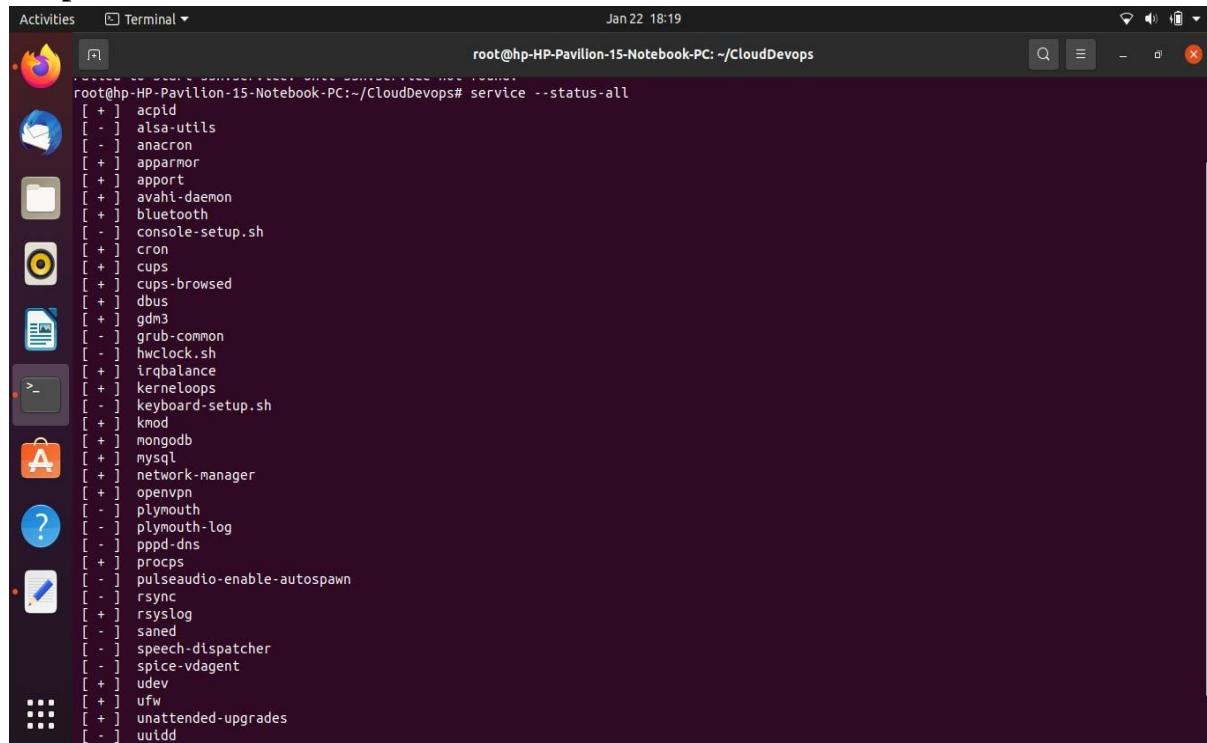
The screenshot shows a terminal window titled "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal displays the following command and its output:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa): Cloud5.txt
Cloud5.txt already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
[4]+  Stopped                  ssh-keygen
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa): Cloud5.txt
Cloud5.txt already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in Clouds.txt
Your public key has been saved in Cloud5.txt.pub
The key fingerprint is:
SHA256:9P0QfpAPIdzrZe6DF4AntMDuG56dAH5uVzxcdAYGRrw root@hp-HP-Pavilion-15-Notebook-PC
The key's randomart image is:
+---[RSA 3072]----+
| .0*o. |
| ooo+o..o |
| o oos,.o. |
| o o *E+..o |
| . S . B.+o |
| . = B... |
| + * o +.. |
| * + . o. |
+---[SHA256]----+
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

29)**service** Linux command to start and stop services

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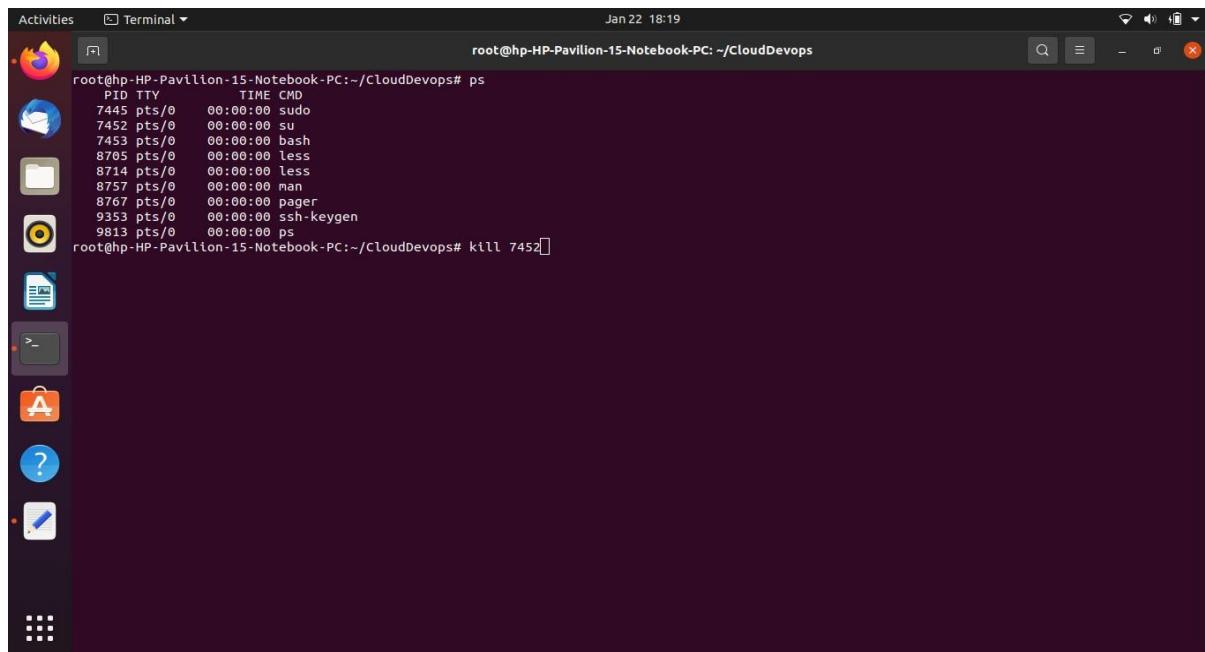
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# service --status-all
[ + ]  acpid
[ - ]  alsa-utils
[ - ]  anacron
[ + ]  apparmor
[ + ]  apport
[ + ]  avahi-daemon
[ + ]  bluetooth
[ - ]  console-setup.sh
[ + ]  cron
[ + ]  cups
[ + ]  cups-browsed
[ + ]  dbus
[ + ]  gdm3
[ - ]  grub-common
[ - ]  hwclock.sh
[ + ]  irqbalance
[ + ]  kerneloops
[ - ]  keyboard-setup.sh
[ + ]  kmiod
[ + ]  mongodb
[ + ]  mysql
[ + ]  network-manager
[ + ]  openvpn
[ - ]  plymouth
[ - ]  plymouth-log
[ - ]  pppd-dns
[ + ]  procs
[ - ]  pulseaudio-enable-autospawn
[ - ]  rsync
[ + ]  rsyslog
[ - ]  saned
[ - ]  speech-dispatcher
[ - ]  spice-vdagent
[ + ]  udev
[ + ]  ufw
[ + ]  unattended-upgrades
[ - ]  uuidd
```

30) **ps** — Display active processes

Output:-



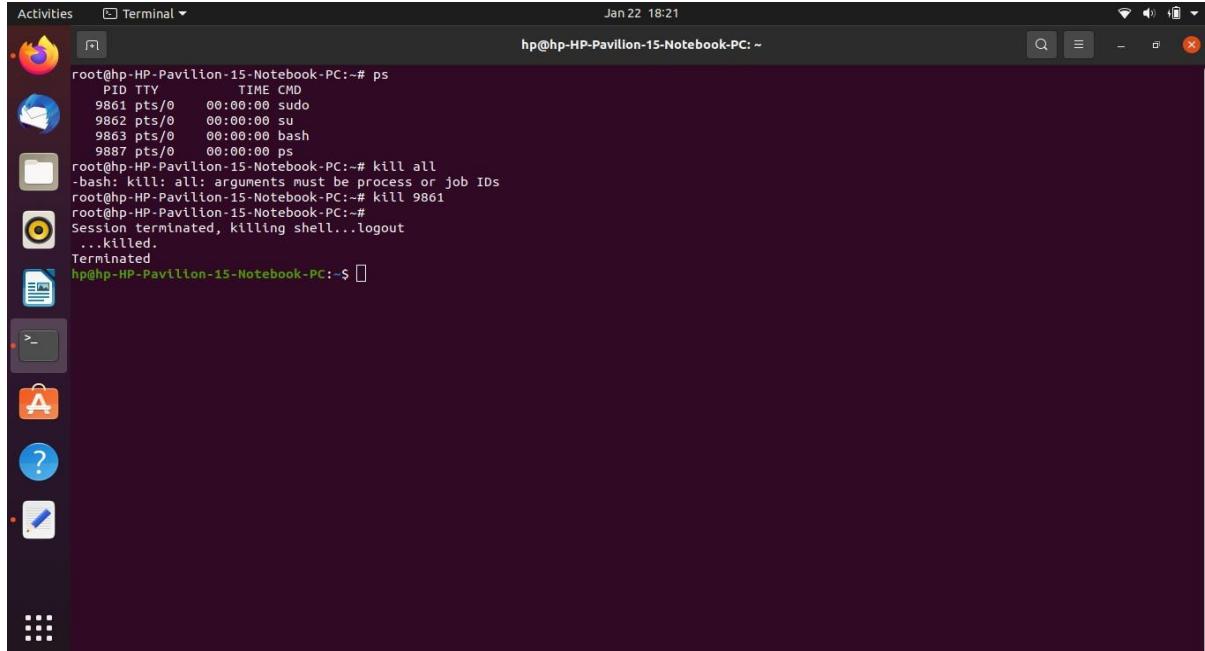
```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ps
 PID TTY      TIME CMD
 7445 pts/0    00:00:00 sudo
 7452 pts/0    00:00:00 su
 7453 pts/0    00:00:00 bash
 8705 pts/0    00:00:00 less
 8714 pts/0    00:00:00 less
 8757 pts/0    00:00:00 man
 8767 pts/0    00:00:00 pager
 9353 pts/0    00:00:00 ssh-keygen
 9813 pts/0    00:00:00 ps
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# kill 7452
```

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31) **kill** and **killall** — Kill active processes by process ID or name

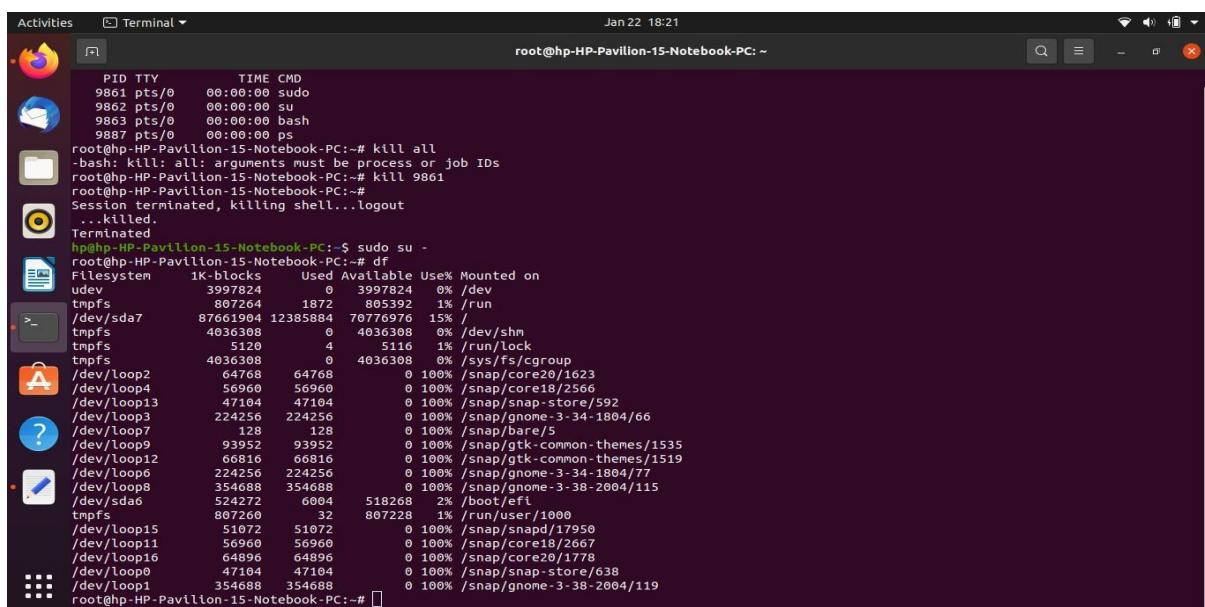
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~# ps
  PID TTY      TIME CMD
 9861 pts/0    00:00:00 sudo
 9862 pts/0    00:00:00 su
 9863 pts/0    00:00:00 bash
 9887 pts/0    00:00:00 ps
root@hp-HP-Pavilion-15-Notebook-PC:~# kill all
-bash: kill: all: arguments must be process or job IDs
root@hp-HP-Pavilion-15-Notebook-PC:~# kill 9861
root@hp-HP-Pavilion-15-Notebook-PC:~#
Session terminated, killing shell...logout
...killed.
Terminated
hp@hp-HP-Pavilion-15-Notebook-PC:~$
```

32) **df** — Display disk filesystem information

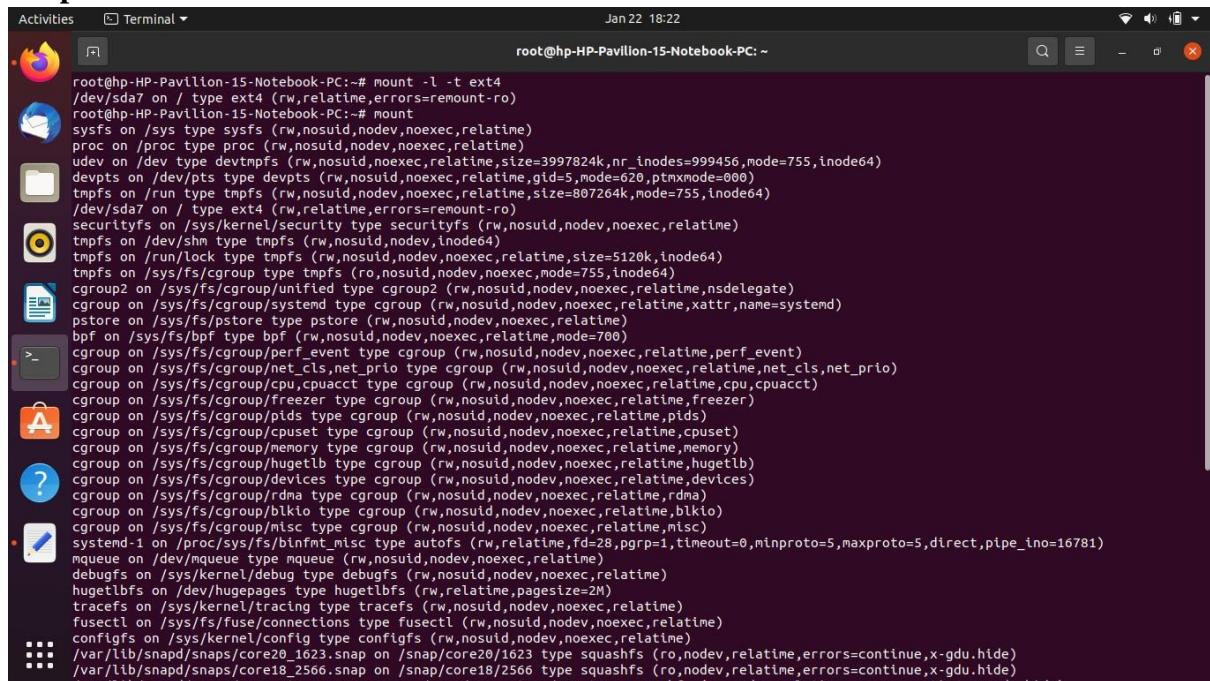
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~# ps
  PID TTY      TIME CMD
 9861 pts/0    00:00:00 sudo
 9862 pts/0    00:00:00 su
 9863 pts/0    00:00:00 bash
 9887 pts/0    00:00:00 ps
root@hp-HP-Pavilion-15-Notebook-PC:~# kill all
-bash: kill: all: arguments must be process or job IDs
root@hp-HP-Pavilion-15-Notebook-PC:~# kill 9861
root@hp-HP-Pavilion-15-Notebook-PC:~#
Session terminated, killing shell...logout
...killed.
Terminated
hp@hp-HP-Pavilion-15-Notebook-PC:~$ sudo su -
root@hp-HP-Pavilion-15-Notebook-PC:~# df
Filesystem 1K-blocks Used Available Use% Mounted on
udev        3997824   0  3997824  0% /dev
tmpfs       807264   1872  805392  1% /run
/dev/sda7  87661904 12385884 70776976 15% /
tmpfs       4036308   0  4036308  0% /dev/shm
tmpfs        5120     4   5116  1% /run/lock
tmpfs       4036308   0  4036308  0% /sys/fs/cgroup
/dev/loop2   64768   64768   0 100% /snap/core18/1623
/dev/loop4   56960   56960   0 100% /snap/core18/2566
/dev/loop13  47104   47104   0 100% /snap/snap-store/592
/dev/loop3   224256  224256   0 100% /snap/gnome-3-34-1804/66
/dev/loop7    128    128   0 100% /snap/bare/5
/dev/loop9   93952   93952   0 100% /snap/gtk-common-themes/1535
/dev/loop12  66816   66816   0 100% /snap/gtk-common-themes/1519
/dev/loop6   224256  224256   0 100% /snap/gnome-3-34-1804/77
/dev/loop8   354688  354688   0 100% /snap/gnome-3-38-2004/115
/dev/sda6  524272   6004  518268  2% /boot/efi
tmpfs       807260    32  807228  1% /run/user/1000
/dev/loop15  51072   51072   0 100% /snap/snapd/17950
/dev/loop11  56960   56960   0 100% /snap/core18/2667
/dev/loop16  64896   64896   0 100% /snap/core20/1778
/dev/loop0   47104   47104   0 100% /snap/snap-store/638
/dev/loop1   354688  354688   0 100% /snap/gnome-3-38-2004/119
root@hp-HP-Pavilion-15-Notebook-PC:~#
```

33)mount — Mount file systems in Linux

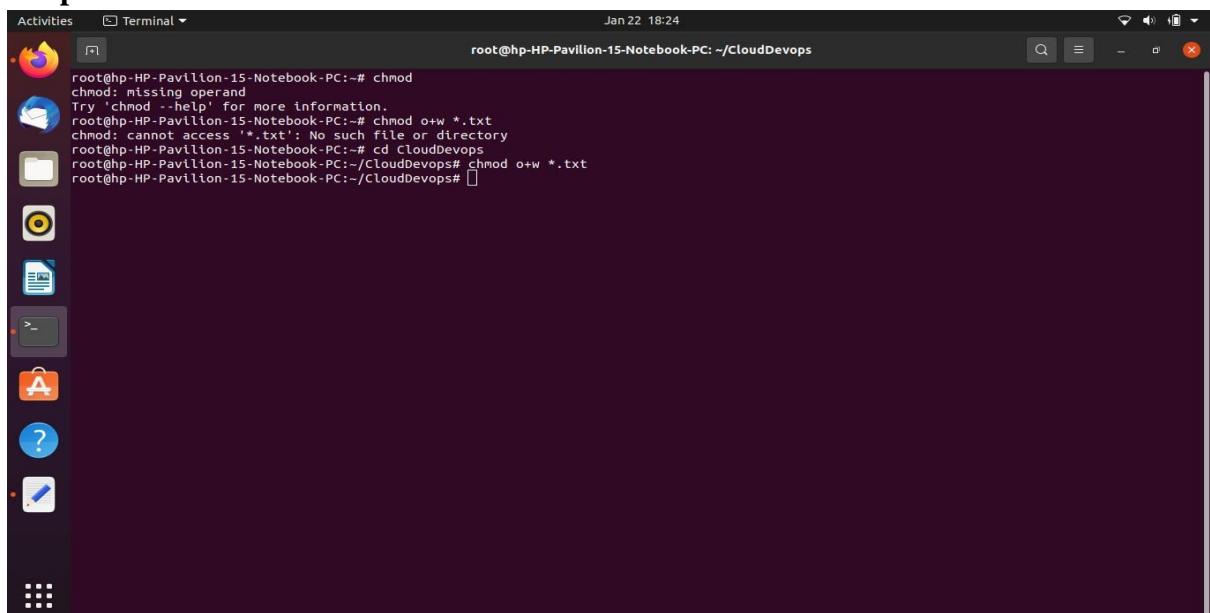
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~# mount -l -t ext4
/dev/sda7 on / type ext4 (rw,relatime,errors=remount-ro)
root@hp-HP-Pavilion-15-Notebook-PC:~# mount
sysfs on /sys type sysfs (rw,nosuid,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,noexec,relatime,size=3997824k,nr_inodes=999456,mode=755,inode64)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,nodev,noexec,relatime,size=807264k,mode=755,inode64)
/dev/sda7 on / type ext4 (rw,relatime,errors=remount-ro)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev,inode64)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k,inode64)
tmpfs on /sys/fs/cgroup type tmpfs (ro,nosuid,nodev,noexec,mode=755,inode64)
cgroup2 on /sys/fs/cgroup/unified type cgroup2 (rw,nosuid,nodev,noexec,relatime,nsdelegate)
cgroup on /sys/fs/cgroup/systemd type cgroup (rw,nosuid,nodev,noexec,relatime,xattr,name=systemd)
pstree on /sys/fs/pstree type pstree (rw,nosuid,nodev,noexec,relatime)
bpf on /sys/fs/bpf type bpf (rw,nosuid,nodev,noexec,relatime,mode=700)
cgroup on /sys/fs/cgroup/perf_event type cgroup (rw,nosuid,nodev,noexec,relatime,perf_event)
cgroup on /sys/fs/cgroup/net_cls.net_prio type cgroup (rw,nosuid,nodev,noexec,relatime,net_cls,net_prio)
cgroup on /sys/fs/cgroup/cpu.cpuacct type cgroup (rw,nosuid,nodev,noexec,relatime,cpu,cpuacct)
cgroup on /sys/fs/cgroup/freezer type cgroup (rw,nosuid,nodev,noexec,relatime,freezer)
cgroup on /sys/fs/cgroup/pids type cgroup (rw,nosuid,nodev,noexec,relatime,pids)
cgroup on /sys/fs/cgroup/cpuset type cgroup (rw,nosuid,nodev,noexec,relatime,cpuset)
cgroup on /sys/fs/cgroup/memory type cgroup (rw,nosuid,nodev,noexec,relatime,memory)
cgroup on /sys/fs/cgroup/hugetlb type cgroup (rw,nosuid,nodev,noexec,relatime,hugetlb)
cgroup on /sys/fs/cgroup/devices type cgroup (rw,nosuid,nodev,noexec,relatime,devices)
cgroup on /sys/fs/cgroup/rdma type cgroup (rw,nosuid,nodev,noexec,relatime,rdma)
cgroup on /sys/fs/cgroup/blkio type cgroup (rw,nosuid,nodev,noexec,relatime,blkio)
cgroup on /sys/fs/cgroup/misc type cgroup (rw,nosuid,nodev,noexec,relatime,misc)
systemd-1 on /proc/sys/binfmt_misc type autofs (rw,relatime,fd=28,grp=1,ttimeout=0,minproto=5,maxproto=5,direct,pipe_ino=16781)
mqueue on /dev/mqueue type mqueue (rw,nosuid,nodev,noexec,relatime)
debugfs on /sys/kernel/debug type debugfs (rw,nosuid,nodev,noexec,relatime)
hugepages on /dev/hugepages type hugepages (rw,relatime,pagesize=2M)
tracefs on /sys/kernel/tracing type tracefs (rw,nosuid,nodev,noexec,relatime)
fusectl on /sys/fs/fuse/connections type fusectl (rw,nosuid,nodev,noexec,relatime)
configs on /sys/kernel/config type configs (rw,nosuid,nodev,noexec,relatime)
root@hp-HP-Pavilion-15-Notebook-PC:~# /var/lib/snapd/snaps/core20_1623.snap on /snap/core20/1623 type squashfs (ro,nodev,relatime,errors=continue,x-gdu.hide)
root@hp-HP-Pavilion-15-Notebook-PC:~# /var/lib/snapd/snaps/core18_2560.snap on /snap/core18/2560 type squashfs (ro,nodev,relatime,errors=continue,x-gdu.hide)
```

34) chmod — Command to change file permissions

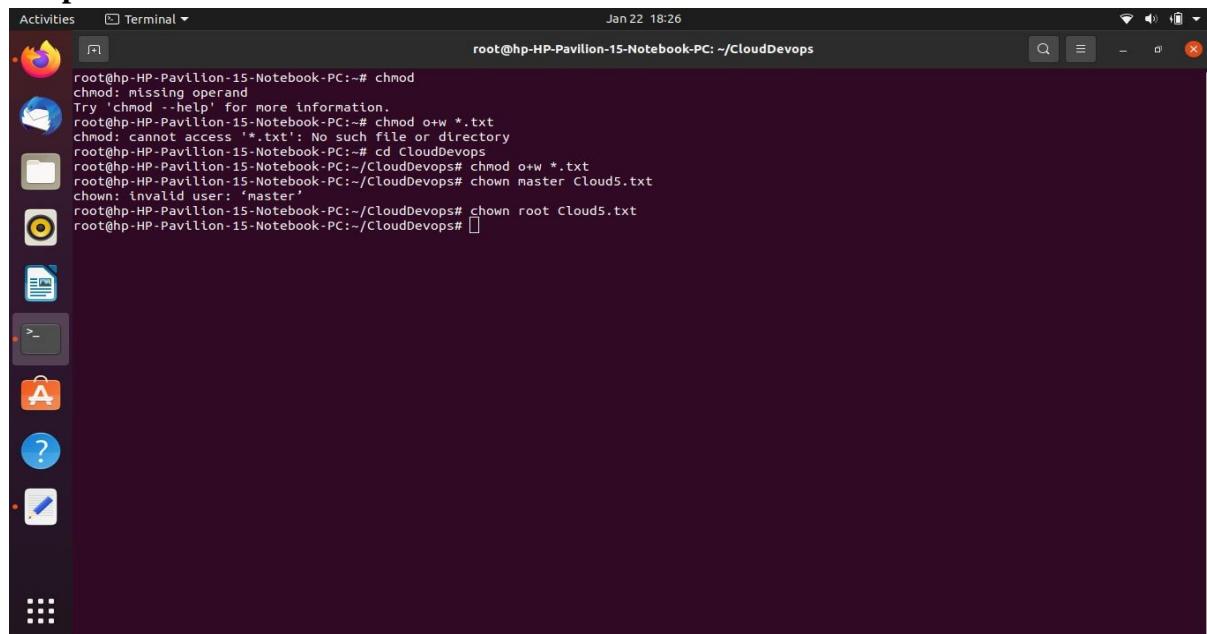
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~# chmod
chmod: missing operand
Try 'chmod --help' for more information.
root@hp-HP-Pavilion-15-Notebook-PC:~# chmod o+w *.txt
chmod: cannot access '*.txt': No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~# cd CloudDevops
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# chmod o+w *.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

35) **chown** — Command for granting ownership of files or folders

Output:-

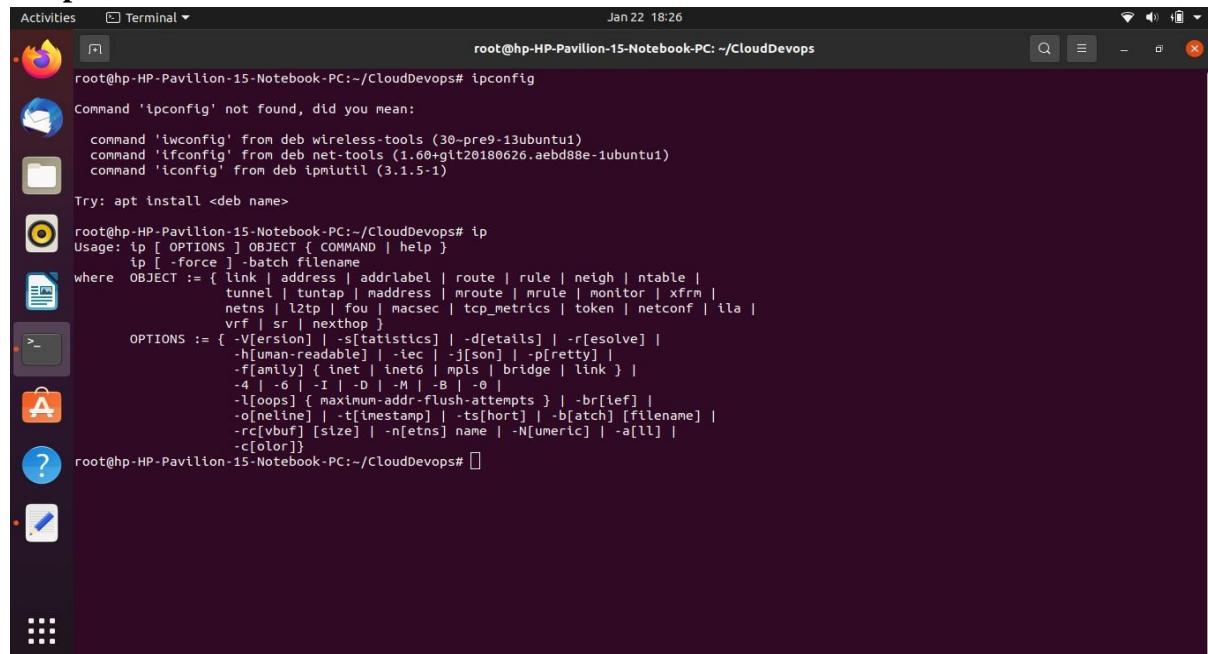


A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal content shows the following command execution:

```
root@hp-HP-Pavilion-15-Notebook-PC:~# chmod
chmod: missing operand
Try 'chmod --help' for more information.
root@hp-HP-Pavilion-15-Notebook-PC:~# chmod o+w *.txt
chmod: cannot access '*.txt': No such file or directory
root@hp-HP-Pavilion-15-Notebook-PC:~# cd CloudDevops
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# chmod o+w *.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# chown master Cloud5.txt
chown: invalid user: 'master'
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# chown root Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

36) **ifconfig** — Display network interfaces and IP addresses

Output:-



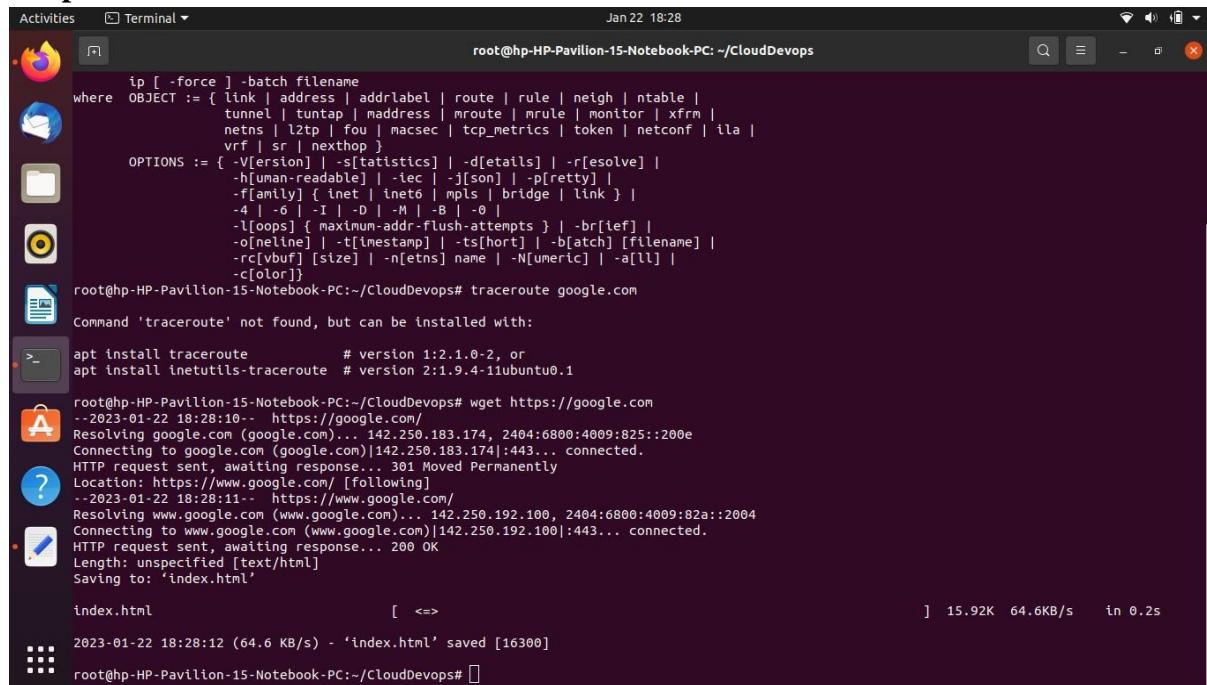
The screenshot shows a terminal window titled "root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#". The window displays the following text:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ipconfig
Command 'ipconfig' not found, did you mean:
  command 'iwconfig' from deb wireless-tools (30-pre9-13ubuntu1)
  command 'ifconfig' from deb net-tools (1.60+git20180626.aebd88e-1ubuntu1)
  command 'iconfig' from deb ipmiutil (3.1.5-1)
Try: apt install <deb name>
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ip
Usage: ip [ OPTIONS ] OBJECT { COMMAND | help }
      ip [ -force ] -batch filename
where OBJECT := { link | address | addrlabel | route | rule | neigh | ntable |
                  tunnel | tuntap | maddress | mroute | mrule | monitor | xfrm |
                  netns | l2tp | fou | macsec | tcp_metrics | token | netconf | ila |
                  vrf | sr | nexthop }
      OPTIONS := { -v[ersion] | -s[tatistics] | -d[etails] | -r[esolve] |
                  -h[uman-readable] | -t[ee] | -j[son] | -p[retty] |
                  -f[amily] { inet | inetc | mpls | bridge | link } |
                  -4 | -6 | -I | -D | -M | -B | -O |
                  -l[oops] { maximum-addr-flush-attempts } | -br[ief] |
                  -o[neline] | -t[imestamp] | -ts[hort] | -b[atch] [filename] |
                  -rc[vbuf] [size] | -n[etns] name | -N[umeric] | -a[ll] |
                  -c[olor] }
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# []
```

37) **traceroute** — Trace all the network hops to reach the destination

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Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# traceroute google.com
Command 'traceroute' not found, but can be installed with:
apt install traceroute      # version 1:2.1.0-2, or
apt install inetutils-traceroute # version 2:1.9.4-11ubuntu0.1

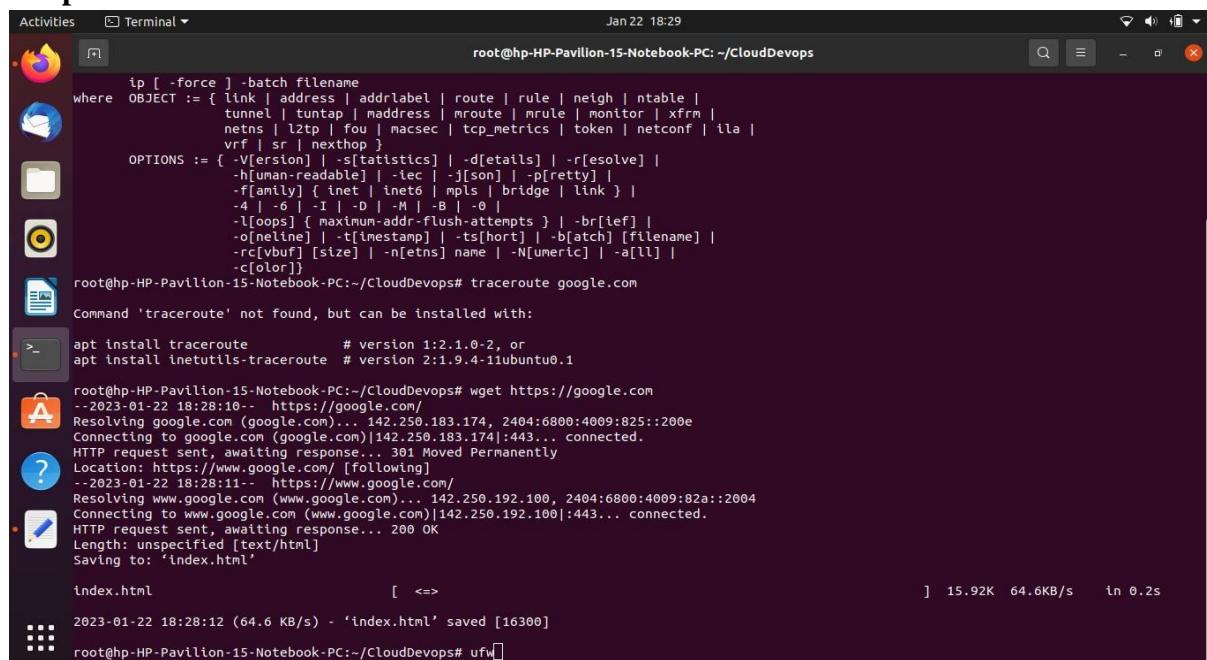
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# wget https://google.com
--2023-01-22 18:28:10- https://google.com/
Resolving google.com (google.com)... 142.250.183.174, 2404:6800:4009:825::200e
Connecting to google.com (google.com)|142.250.183.174|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://www.google.com/ [following]
--2023-01-22 18:28:11- https://www.google.com/
Resolving www.google.com (www.google.com)... 142.250.192.100, 2404:6800:4009:82a::2004
Connecting to www.google.com (www.google.com)|142.250.192.100|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Saving to: 'index.html'

index.html                                         [ => ] 15.92K 64.6KB/s   in 0.25

2023-01-22 18:28:12 (64.6 KB/s) - 'index.html' saved [16300]
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

38) wget — Direct download files from the internet

Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# traceroute google.com
Command 'traceroute' not found, but can be installed with:
apt install traceroute      # version 1:2.1.0-2, or
apt install inetutils-traceroute # version 2:1.9.4-11ubuntu0.1

root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# wget https://google.com
--2023-01-22 18:28:10- https://google.com/
Resolving google.com (google.com)... 142.250.183.174, 2404:6800:4009:825::200e
Connecting to google.com (google.com)|142.250.183.174|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://www.google.com/ [following]
--2023-01-22 18:28:11- https://www.google.com/
Resolving www.google.com (www.google.com)... 142.250.192.100, 2404:6800:4009:82a::2004
Connecting to www.google.com (www.google.com)|142.250.192.100|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Saving to: 'index.html'

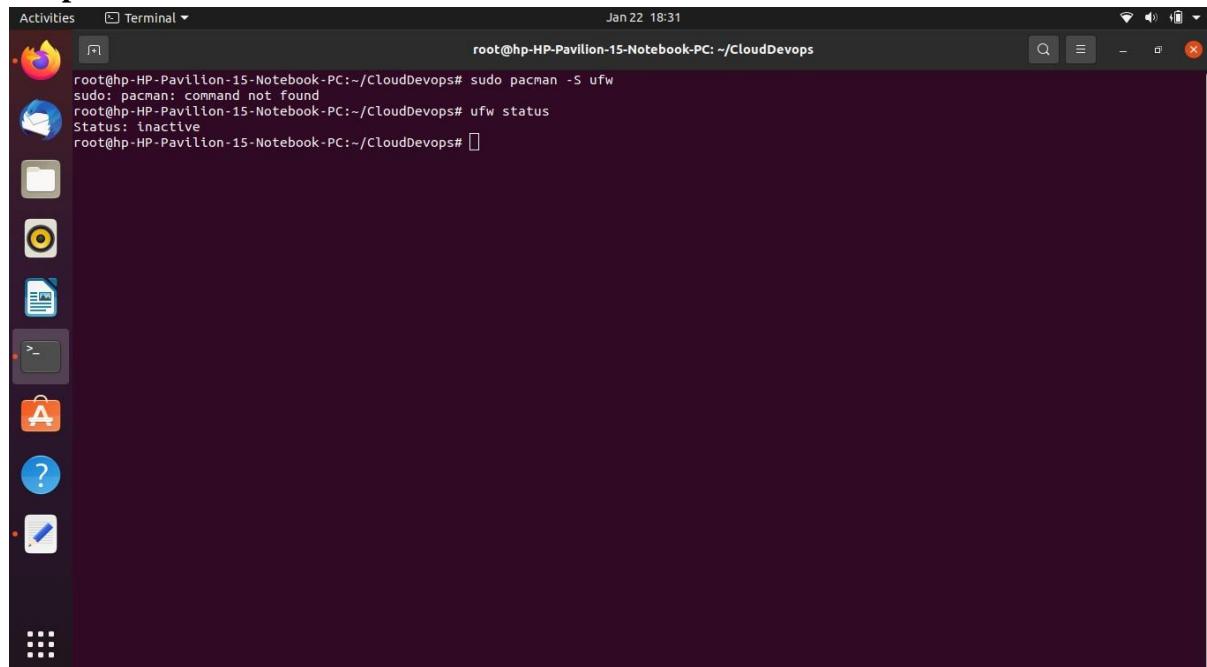
index.html                                         [ => ] 15.92K 64.6KB/s   in 0.25

2023-01-22 18:28:12 (64.6 KB/s) - 'index.html' saved [16300]
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ufw
```

39) ufw — Firewall command

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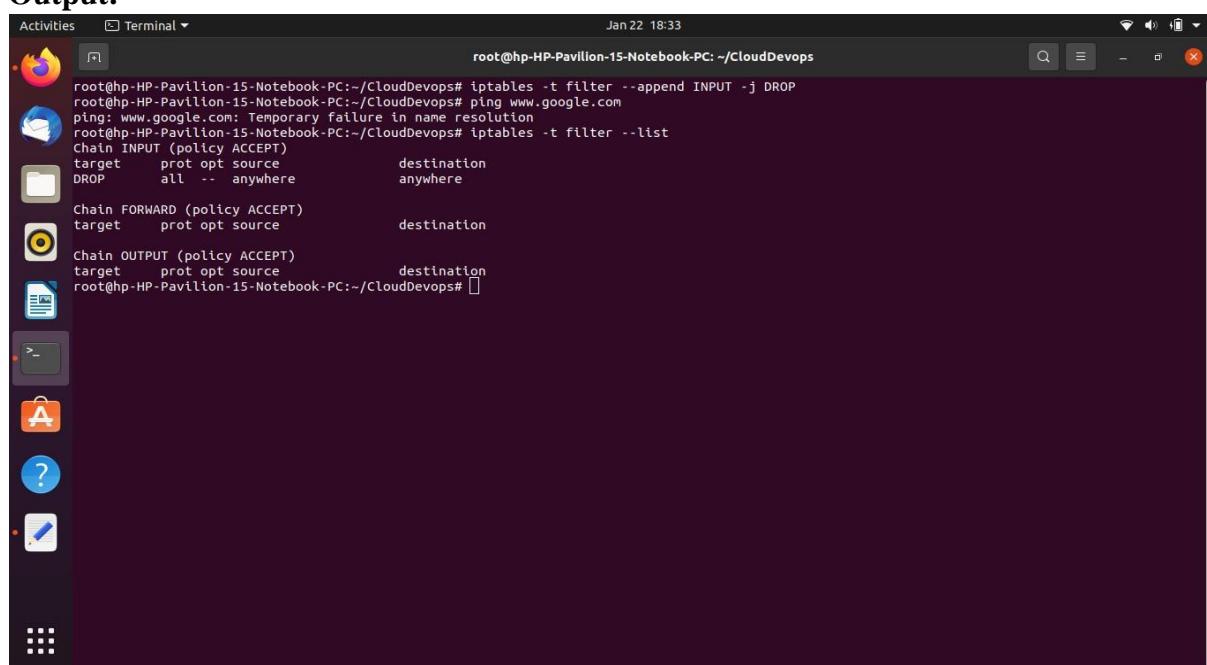
Output:-



```
Activities Terminal Jan 22 18:31
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# sudo pacman -S ufw
sudo: pacman: command not found
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ufw status
Status: Inactive
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

40) **iptables** — Base firewall for all other firewall utilities to interface with

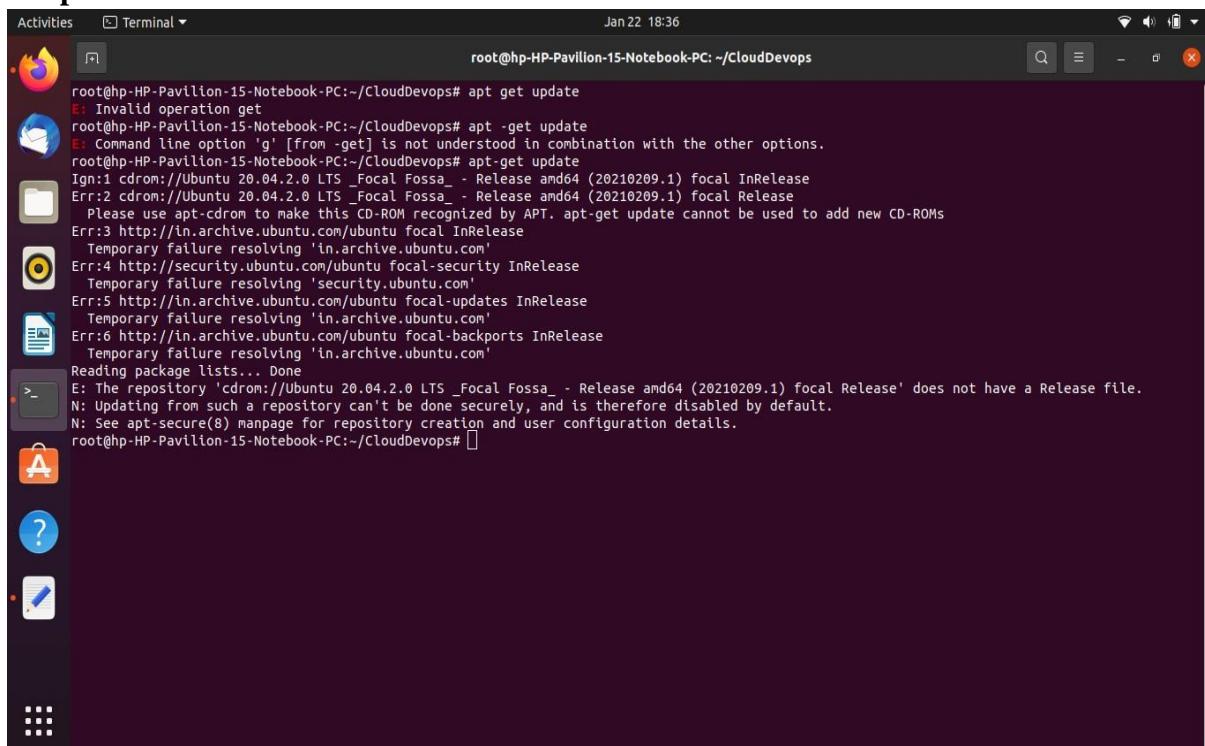
Output:-



```
Activities Terminal Jan 22 18:33
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# iptables -t filter --append INPUT -j DROP
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ping www.google.com
ping: www.google.com: Temporary failure in name resolution
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# iptables -t filter --list
Chain INPUT (policy ACCEPT)
  target     prot opt source          destination
    DROP      all   --  anywhere        anywhere
Chain FORWARD (policy ACCEPT)
  target     prot opt source          destination
Chain OUTPUT (policy ACCEPT)
  target     prot opt source          destination
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

41) **apt, pacman, yum, rpm** — Package managers depending on the distro

Output:-



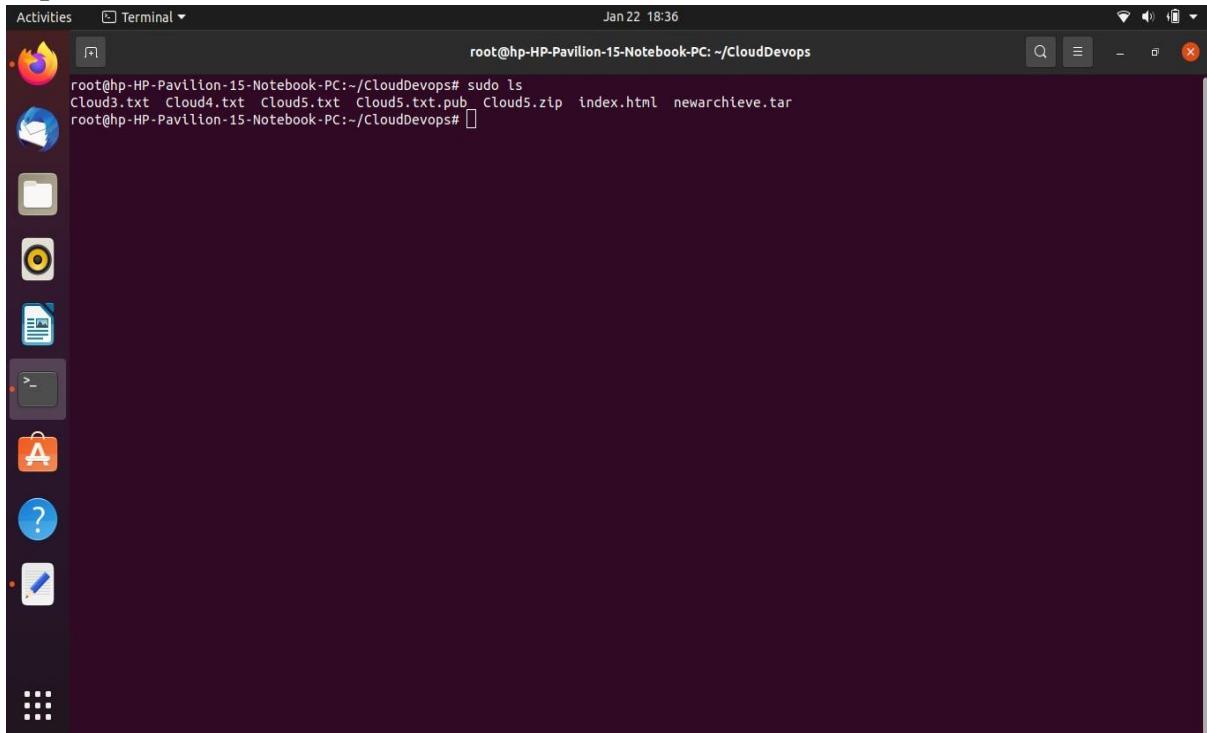
A screenshot of a Linux terminal window titled "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The window shows the command "apt get update" being run, followed by several error messages. The errors indicate that the command line option 'g' [from -get] is not understood in combination with the other options, and that apt-get update cannot be used to add new CD-ROMs. It also mentions temporary failure resolving various URLs and that the repository 'cdrom://Ubuntu 20.04.2.0 LTS _Focal Fossa_ - Release amd64 (20210209.1) focal InRelease' does not have a Release file, so it is disabled by default.

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# apt get update
E: Invalid operation get
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# apt -get update
E: Command line option 'g' [from -get] is not understood in combination with the other options.
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# apt-get update
Ign:1 cdrom://Ubuntu 20.04.2.0 LTS _Focal Fossa_ - Release amd64 (20210209.1) focal InRelease
Err:2 cdrom://Ubuntu 20.04.2.0 LTS _Focal Fossa_ - Release amd64 (20210209.1) focal Release
  Please use apt-cdrom to make this CD-ROM recognized by APT. apt-get update cannot be used to add new CD-ROMs
Err:3 http://in.archive.ubuntu.com/ubuntu focal InRelease
  Temporary failure resolving 'in.archive.ubuntu.com'
Err:4 http://security.ubuntu.com/ubuntu focal-security InRelease
  Temporary failure resolving 'security.ubuntu.com'
Err:5 http://in.archive.ubuntu.com/ubuntu focal-updates InRelease
  Temporary failure resolving 'in.archive.ubuntu.com'
Err:6 http://in.archive.ubuntu.com/ubuntu focal-backports InRelease
  Temporary failure resolving 'in.archive.ubuntu.com'
Reading package lists... Done
E: The repository 'cdrom://Ubuntu 20.04.2.0 LTS _Focal Fossa_ - Release amd64 (20210209.1) focal Release' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ]
```

42) **sudo** — Command to escalate privileges in Linux

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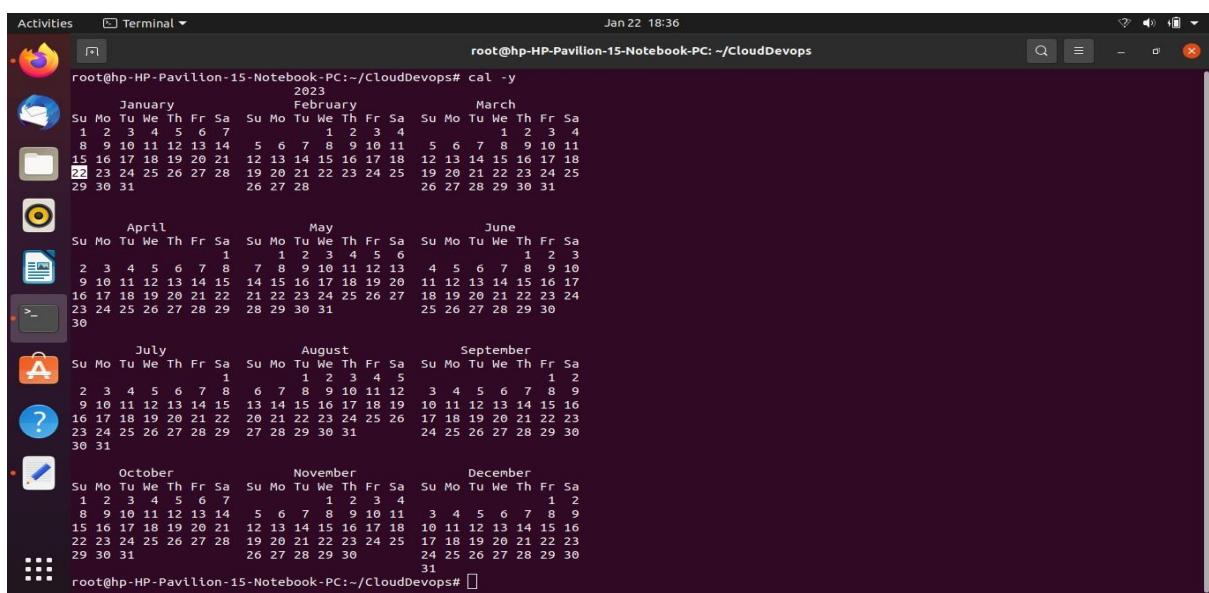
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# sudo ls
Cloud3.txt Cloud4.txt Cloud5.txt Cloud5.pub Cloud5.zip index.html newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

43)cal — View a command-line calendar

Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cal -y
2023
January February March
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 1 2 3 4 5 6 1 2 3 4
8 9 10 11 12 13 14 5 6 7 8 9 10 11 5 6 7 8 9 10 11
15 16 17 18 19 20 21 12 13 14 15 16 17 18 12 13 14 15 16 17 18
22 23 24 25 26 27 28 19 20 21 22 23 24 25 19 20 21 22 23 24 25
29 30 31 26 27 28 26 27 28 29 30 31

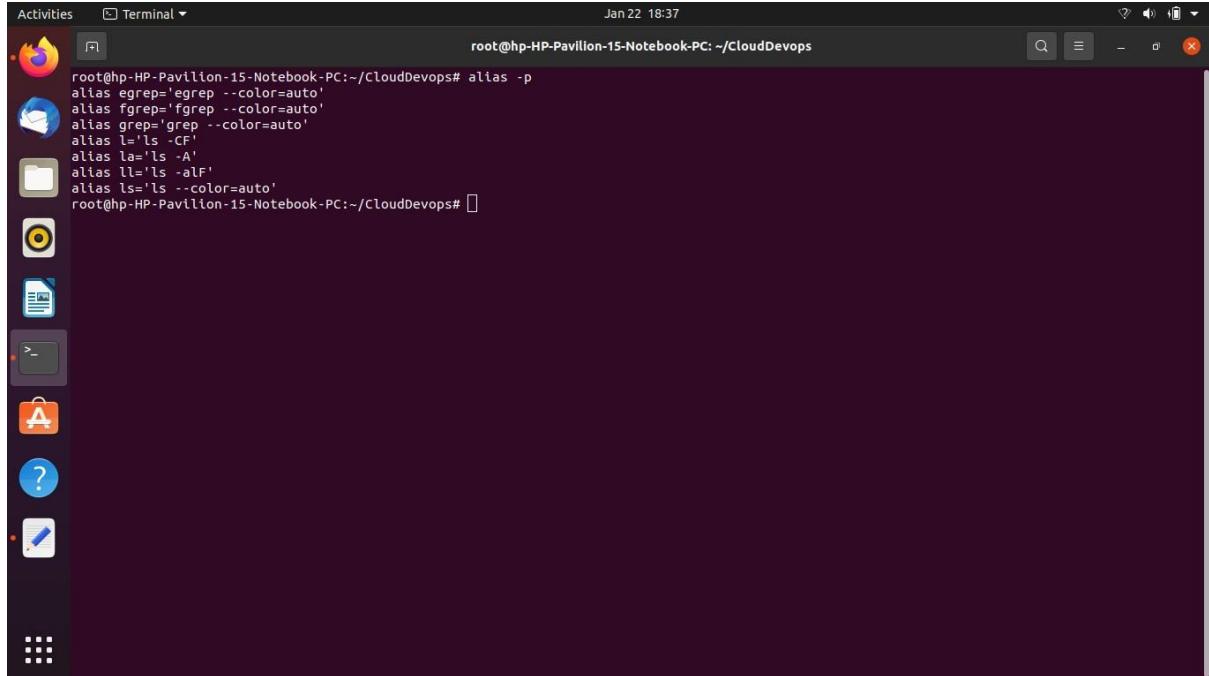
April May June
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 8 1 2 3 4 5 6 1 2 3
9 10 11 12 13 14 15 14 15 16 17 18 19 20 11 12 13 14 15 16 17
16 17 18 19 20 21 22 21 22 23 24 25 26 27 18 19 20 21 22 23 24
23 24 25 26 27 28 29 28 29 30 31 25 26 27 28 29 30
30

July August September
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 8 1 2 3 4 5 1 2
2 3 4 5 6 7 8 6 7 8 9 10 11 12 3 4 5 6 7 8 9
9 10 11 12 13 14 15 13 14 15 16 17 18 19 10 11 12 13 14 15 16
16 17 18 19 20 21 22 20 21 22 23 24 25 26 17 18 19 20 21 22 23
23 24 25 26 27 28 29 27 28 29 30 31 24 25 26 27 28 29 30
30 31

October November December
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7 1 2 3 4 1 2
8 9 10 11 12 13 14 5 6 7 8 9 10 11 3 4 5 6 7 8 9
15 16 17 18 19 20 21 12 13 14 15 16 17 18 10 11 12 13 14 15 16
22 23 24 25 26 27 28 19 20 21 22 23 24 25 17 18 19 20 21 22 23
29 30 31 26 27 28 29 30 24 25 26 27 28 29 30
31
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

44) **alias** — Create custom shortcuts for your regularly used commands

Output:-



A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal content shows the output of the "alias" command:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# alias -p
alias egrep='egrep --color=auto'
alias fgrep='fgrep --color=auto'
alias grep='grep --color=auto'
alias l='ls -CF'
alias la='ls -A'
alias ll='ls -alF'
alias ls='ls --color=auto'
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

The terminal window has a dark background and light-colored text. The desktop interface includes a dock on the left with icons for various applications like a browser, file manager, and terminal.

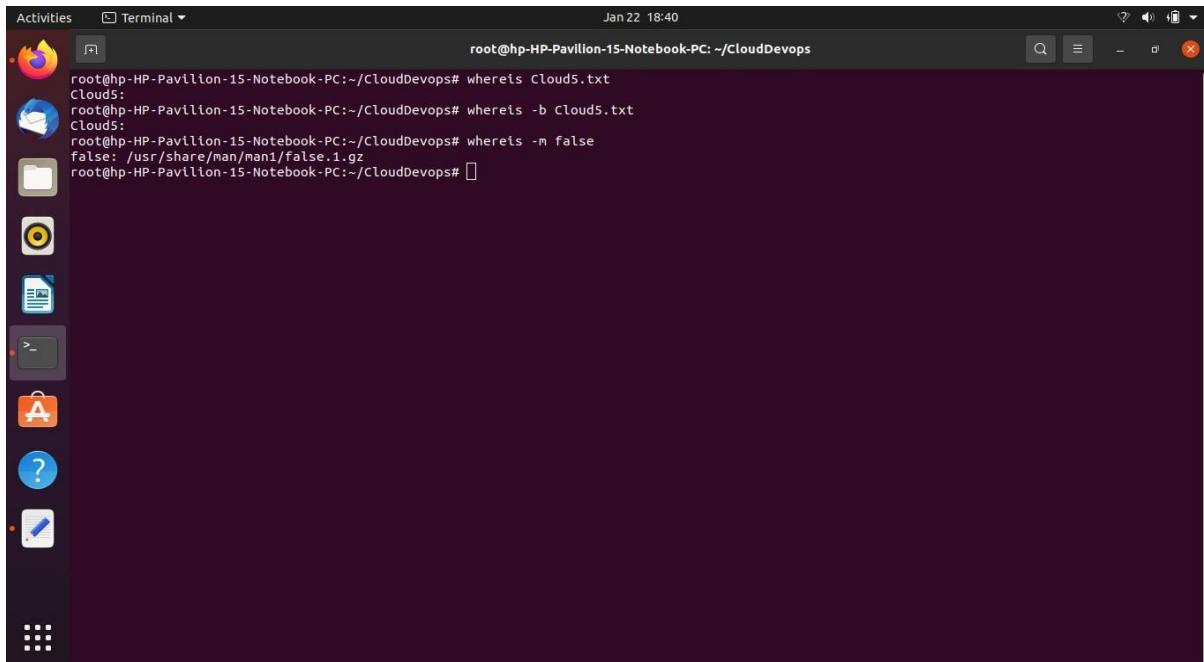
45) **dd** — Majorly used for creating bootable USB sticks

Output:-

46) **whereis** — Locate the binary, source, and manual pages for a command

Output:-

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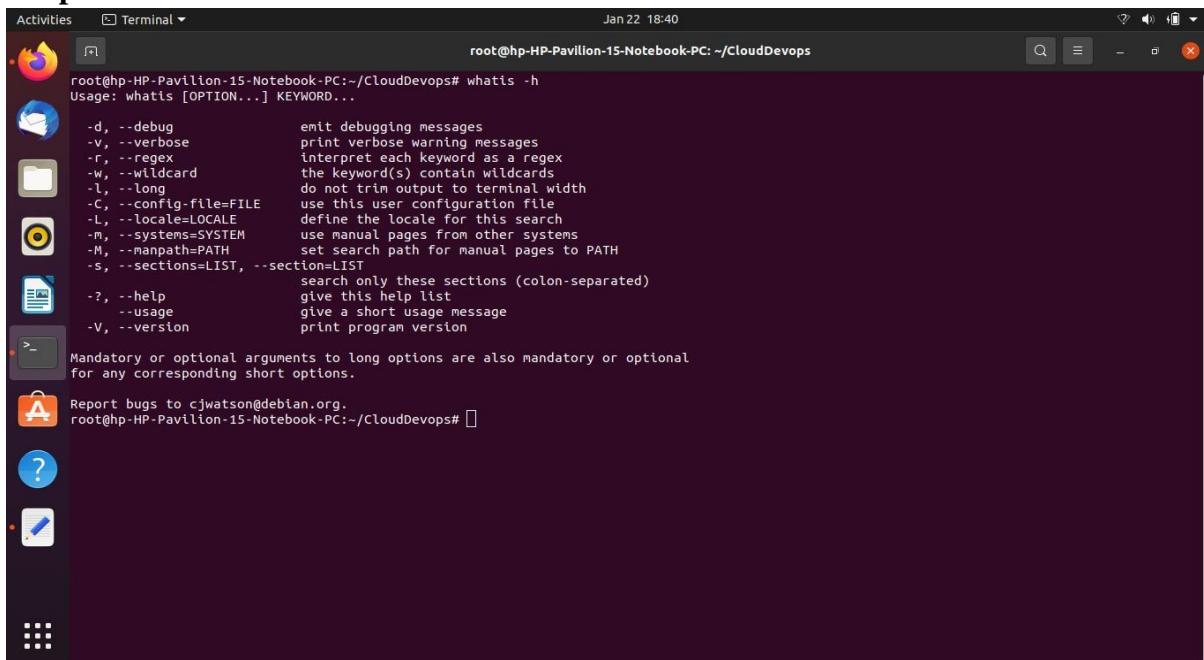


A screenshot of a Linux desktop environment. On the left is a vertical dock with icons for various applications like a browser, file manager, terminal, and system settings. The main window is a terminal window titled "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal shows the following command and output:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# whereis Cloud5.txt
Cloud5:
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# whereis -b Cloud5.txt
Cloud5:
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# whereis -m false
false: /usr/share/man/man1/false.1.gz
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

47) **whatis** — Find what a command is used for

Output:-



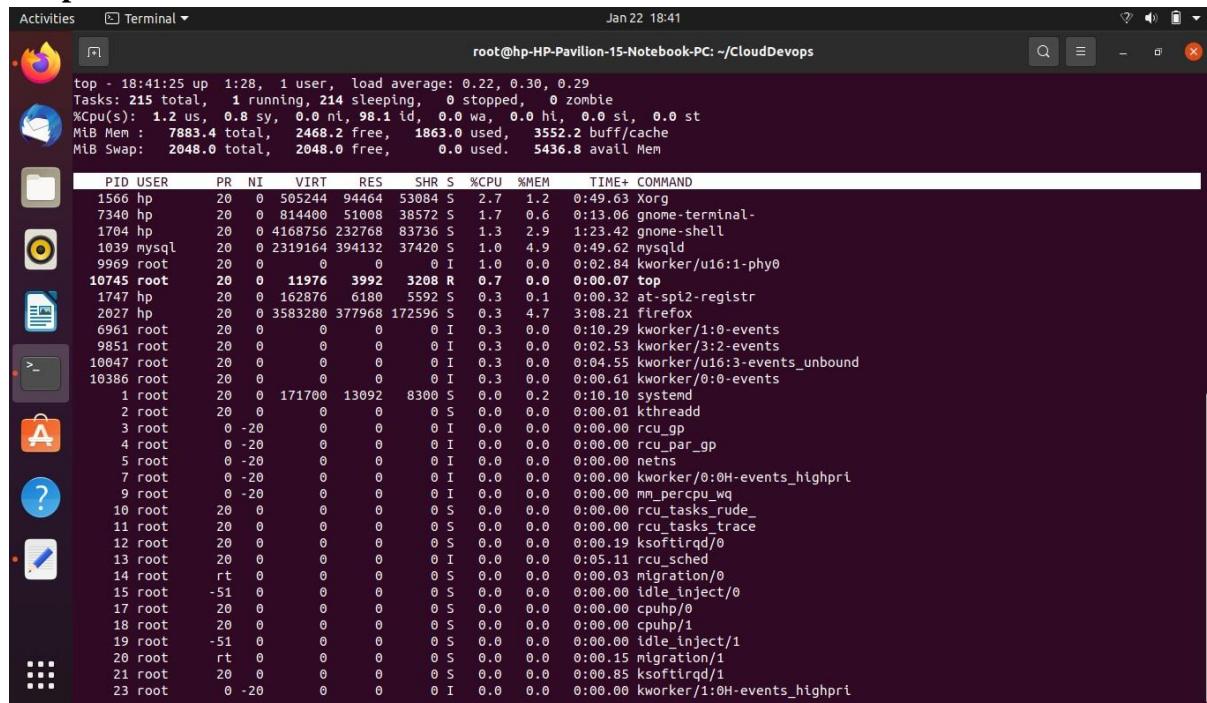
A screenshot of a Linux desktop environment, similar to the one above. The terminal window shows the usage information for the "whatis" command:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# whatis -h
Usage: whatis [OPTION...| KEYWORD...
-d, --debug          emit debugging messages
-v, --verbose        print verbose warning messages
-r, --regex          interpret each keyword as a regex
-w, --wildcard       the keyword(s) contain wildcards
-l, --long           do not trim output to terminal width
-C, --config-file=FILE use this user configuration file
-L, --locale=LOCALE  define the locale for this search
-m, --systems=SYSTEM use manual pages from other systems
-M, --manpath=PATH   set search path for manual pages to PATH
-s, --sections=LIST, --section=LIST
                   search only these sections (colon-separated)
-?, --help            give this help list
--usage              give a short usage message
-V, --version         print program version
Mandatory or optional arguments to long options are also mandatory or optional
for any corresponding short options.
Report bugs to cjwatson@debian.org.
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

48)**top** — View active processes live with their system usage

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Output:-

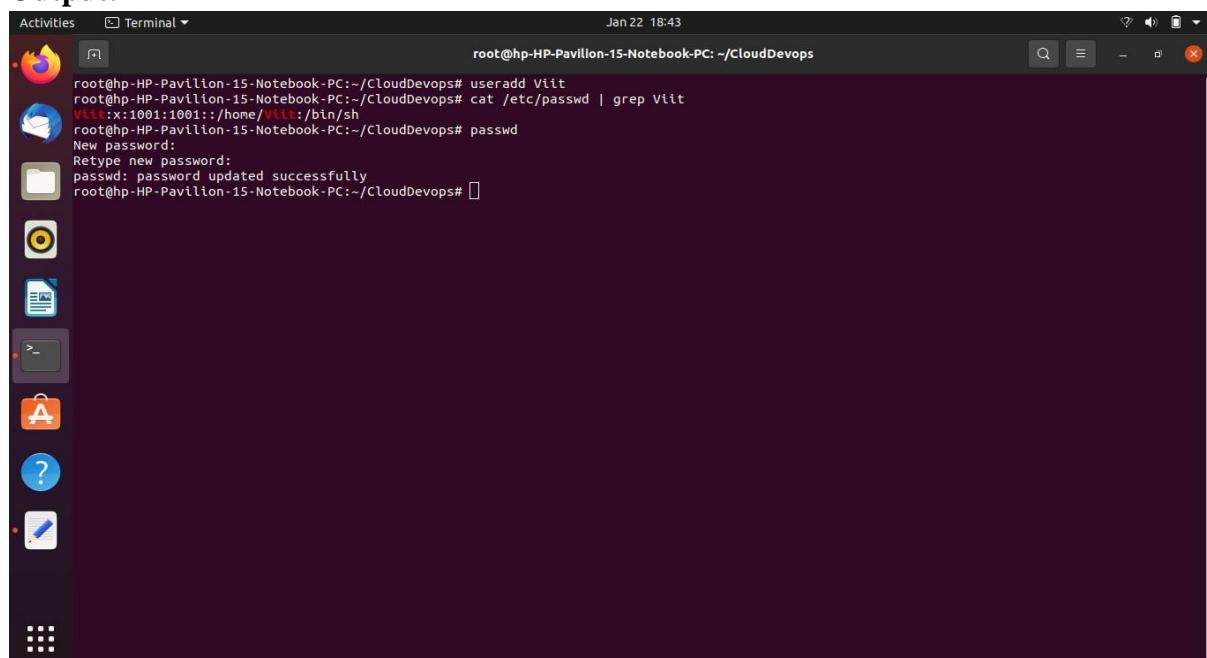


A screenshot of a Linux terminal window titled "Terminal". The window shows system monitoring output from the "top" command. The output includes system load average (0.22, 0.30, 0.29), task counts (215 total, 1 running, 214 sleeping, 0 stopped, 0 zombie), CPU usage (%Cpu(s)), memory usage (MiB Mem: 7883.4 total, 2468.2 free, 1863.0 used, 3552.2 buff/cache, MiB Swap: 2048.0 total, 2048.0 free, 0.0 used, 5436.8 avail Mem), and a detailed process list with columns for PID, USER, PR, NI, VIRT, RES, SHR, %CPU, %MEM, TIME+, and COMMAND.

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1566	hp	20	0	505244	94464	53084	S	2.7	1.2	0:49.63	Xorg
7340	hp	20	0	814400	51068	38572	S	1.7	0.6	0:13.06	gnome-terminal
1704	hp	20	0	4168756	232768	83736	S	1.3	2.9	1:23.42	gnome-shell
1039	mysql	20	0	2319164	394132	37420	S	1.0	4.9	0:49.62	mysqld
9969	root	20	0	0	0	0	I	1.0	0.0	0:02.84	kworker/u16:1-phy0
10745	root	20	0	11976	3992	3208	R	0.7	0.0	0:00.07	top
1747	hp	20	0	162876	6180	5592	S	0.3	0.1	0:00.32	at-spi2-registr
2027	hp	20	0	3583280	377968	172596	S	0.3	4.7	3:08.21	firefox
6961	root	20	0	0	0	0	I	0.3	0.0	0:10.29	kworker/1:0-events
9851	root	20	0	0	0	0	I	0.3	0.0	0:02.53	kworker/3:2-events
10047	root	20	0	0	0	0	I	0.3	0.0	0:04.55	kworker/u16:3-events_unbound
10386	root	20	0	0	0	0	I	0.3	0.0	0:00.61	kworker/0:0-events
1	root	20	0	171700	13092	8300	S	0.0	0.2	0:10.10	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par_gp
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
7	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
9	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_wq
10	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tasks_rude
11	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tasks_trace
12	root	20	0	0	0	0	S	0.0	0.0	0:00.19	ksoftirqd/0
13	root	20	0	0	0	0	I	0.0	0.0	0:05.11	rcu_sched
14	root	rt	0	0	0	0	S	0.0	0.0	0:00.03	migration/0
15	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_inject/0
17	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/1
19	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_inject/1
20	root	rt	0	0	0	0	S	0.0	0.0	0:00.15	migration/1
21	root	20	0	0	0	0	S	0.0	0.0	0:00.85	ksoftirqd/1
23	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/1:0H-events_highpri

49) useradd and usermod — Add new user or change existing users data

Output:-

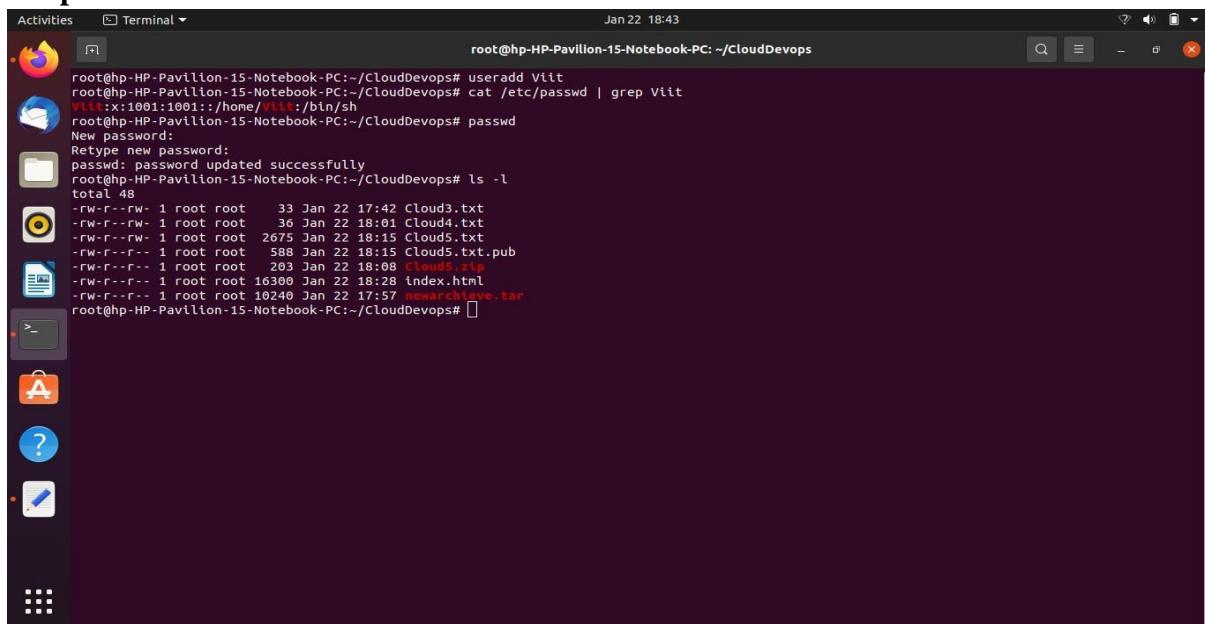


A screenshot of a Linux terminal window titled "Terminal". The window shows the creation of a new user "Viit" using the "useradd" command. It then displays the contents of the "/etc/passwd" file, which now includes the new user entry. Finally, it shows the password being updated for the new user using the "passwd" command.

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# useradd Viit
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# cat /etc/passwd | grep Viit
Viit:x:1001:1001::/home/Viit:/bin/sh
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# passwd
New password:
Retype new password:
passwd: password updated successfully
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

50) **passwd** — Create or update passwords for existing users

Output:-

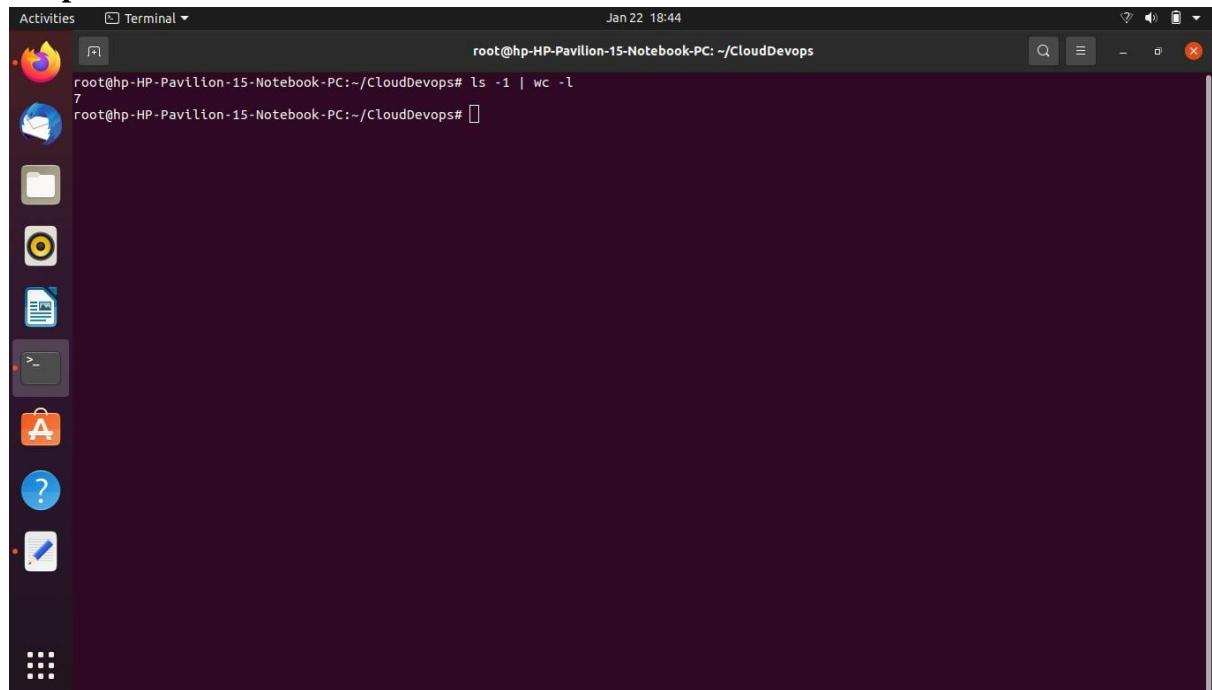


A screenshot of a Linux desktop environment showing a terminal window. The terminal title is "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal content shows the following command being run:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# useradd Vitt
Vitt:x:1001:1001:/home/Vitt:/bin/sh
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# passwd
New password:
Retype new password:
passwd: password updated successfully
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -l
total 48
-rw-r--rw- 1 root root    33 Jan 22 17:42 Cloud3.txt
-rw-r--rw- 1 root root   36 Jan 22 18:01 Cloud4.txt
-rw-r--rw- 1 root root  2675 Jan 22 18:15 Cloud5.txt
-rw-r--r-- 1 root root   588 Jan 22 18:15 Cloud5.txt.pub
-rw-r--r-- 1 root root   203 Jan 22 18:08 Cloud5.zip
-rw-r--r-- 1 root root 16300 Jan 22 18:28 index.html
-rw-r--r-- 1 root root 10240 Jan 22 17:57 newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

51) **ls -l | wc -l** — Command to get the count of the files present into directory.

Output:-

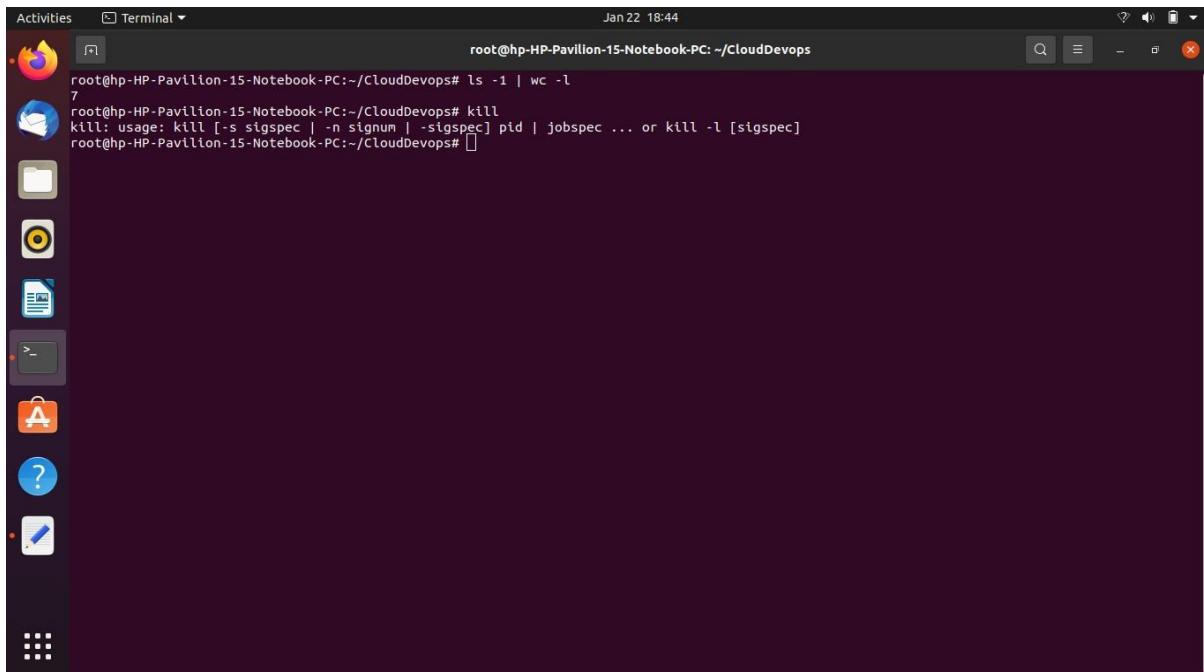


A screenshot of a Linux desktop environment showing a terminal window. The terminal window is titled "Terminal" and has the date and time "Jan 22 18:44" at the top right. The command "root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -l | wc -l" is entered, followed by the number "7". The terminal window is part of a desktop interface with a dark theme, and a vertical dock on the left contains icons for various applications like a browser, file manager, terminal, and system settings.

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -l | wc -l
7
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

--
52) **kill** Command to kill the process (PID)

Output:-

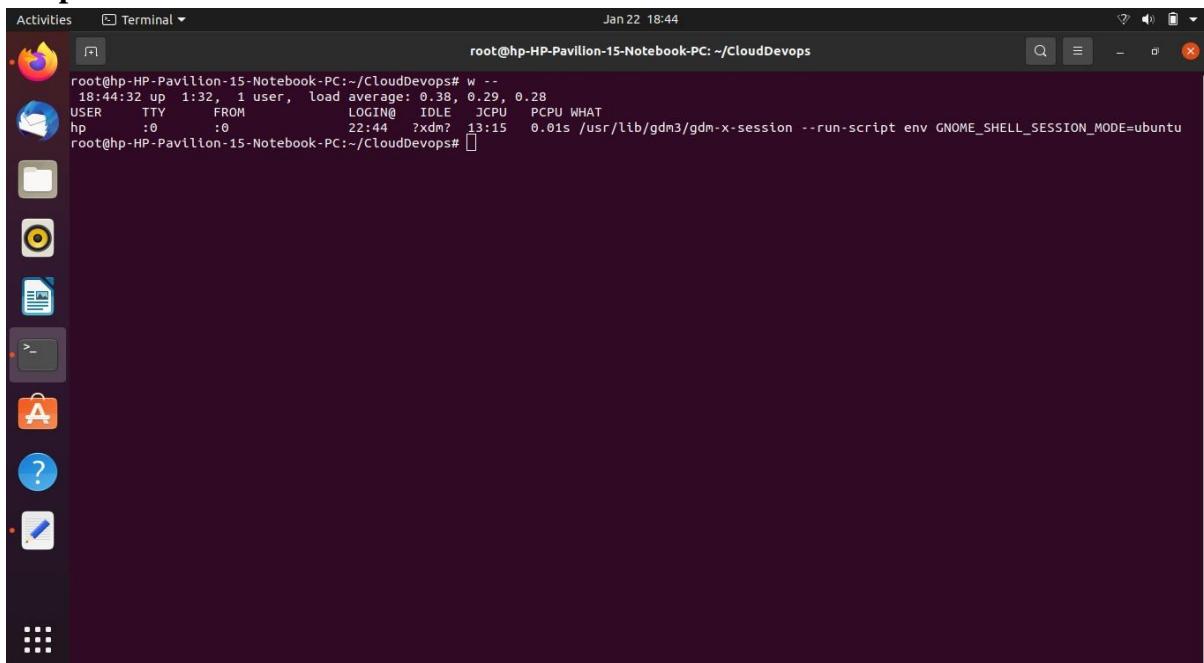


A screenshot of a Linux desktop environment showing a terminal window. The terminal title is "root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops". The command entered is "kill -l", which displays the usage information for the kill command. The output shows the following:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# kill -l
kill: usage: kill [-s sigspec | -n signum | -sigsig] pid | jobspec ... or kill -l [sigspec]
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# [ ]
```

53) **w** -- to check how many users logged into the linux

Output:-

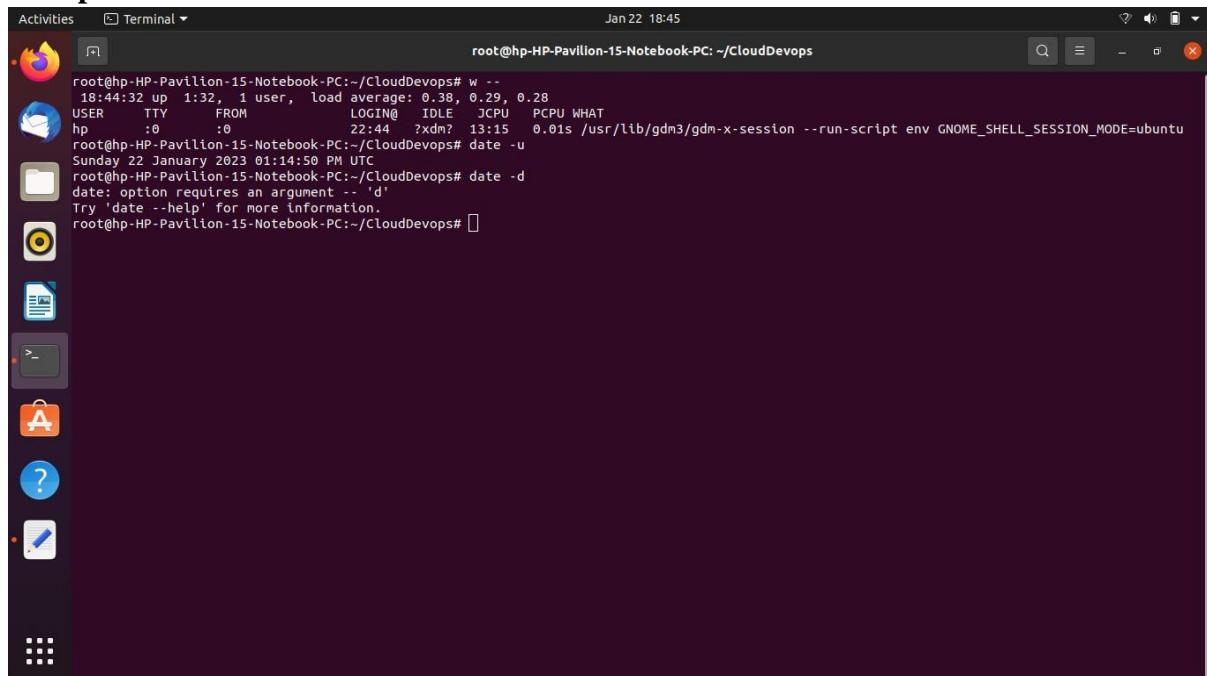


A screenshot of a Linux desktop environment showing a terminal window. The terminal title is "root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops". The command entered is "w", which displays a list of users currently logged into the system. The output shows the following:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# w --
18:44:32 up 1:32, 1 user, load average: 0.38, 0.29, 0.28
USER     TTY      FROM          LOGIN@    IDLE   JCPU   PCPU WHAT
root     :0        :0           22:44 ?xdm?  13:15   0.01s /usr/lib/gdm3/gdm-x-session --run-script env GNOME_SESSION_MODE=ubuntu
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# [ ]
```

54) **date** used to check the current date, time in linux

Output:-



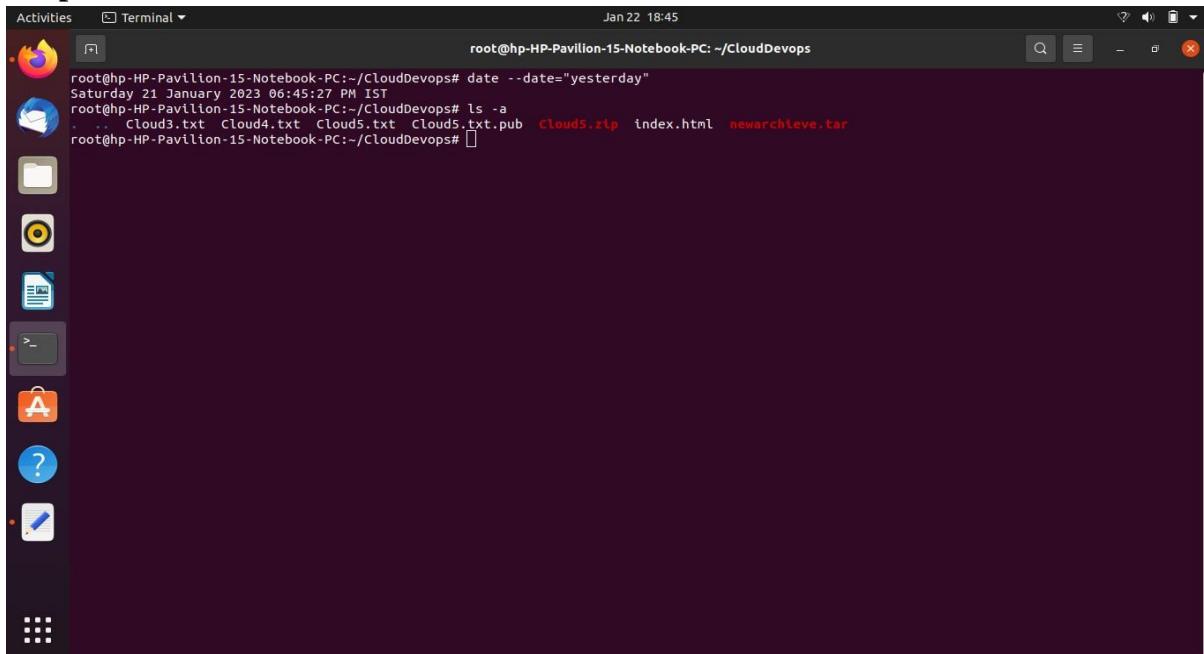
A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The window shows the following text:

```
w --  
18:44:32 up 1:32, 1 user, load average: 0.38, 0.29, 0.28  
USER TTY FROM LOGIN@ IDLE CPU WHAT  
hp :0 :0 22:44 ?xdm? 13:15 0.01s /usr/lib/gdm3/gdm-x-session --run-script env GNOME_SESSION_MODE=ubuntu  
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# date -u  
Sunday 22 January 2023 01:14:50 PM UTC  
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# date -d  
date: option requires an argument -- 'd'  
Try 'date --help' for more information.  
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

55) **ls -a** --List the hidden files in directory (hidden files are denoted as ..)

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Output:-



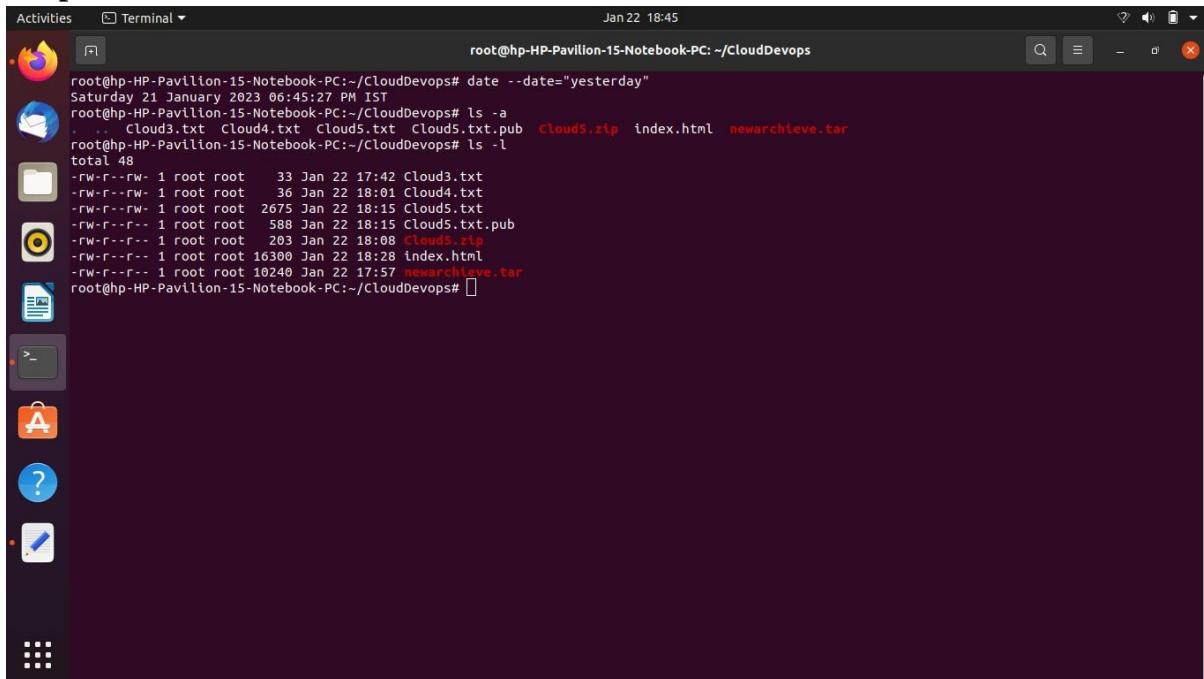
A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "Terminal" and the status bar shows "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops" and the date and time "Jan 22 18:45". The terminal content shows the following commands and output:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# date --date="yesterday"
Saturday 21 January 2023 06:45:27 PM IST
root@hp-HP-Pavillon-15-Notebook-PC:~/CloudDevops# ls -a
.  ..  Cloud3.txt  Cloud4.txt  Cloud5.txt  Cloud5.txt.pub  Cloud5.zip  index.html  newarchive.tar
root@hp-HP-Pavillon-15-Notebook-PC:~/CloudDevops#
```

The terminal is part of a desktop interface with a dark theme. A vertical dock on the left contains icons for various applications like a browser, file manager, terminal, and system settings.

56)ls -l Use to check the permissions on all the files

Output:-



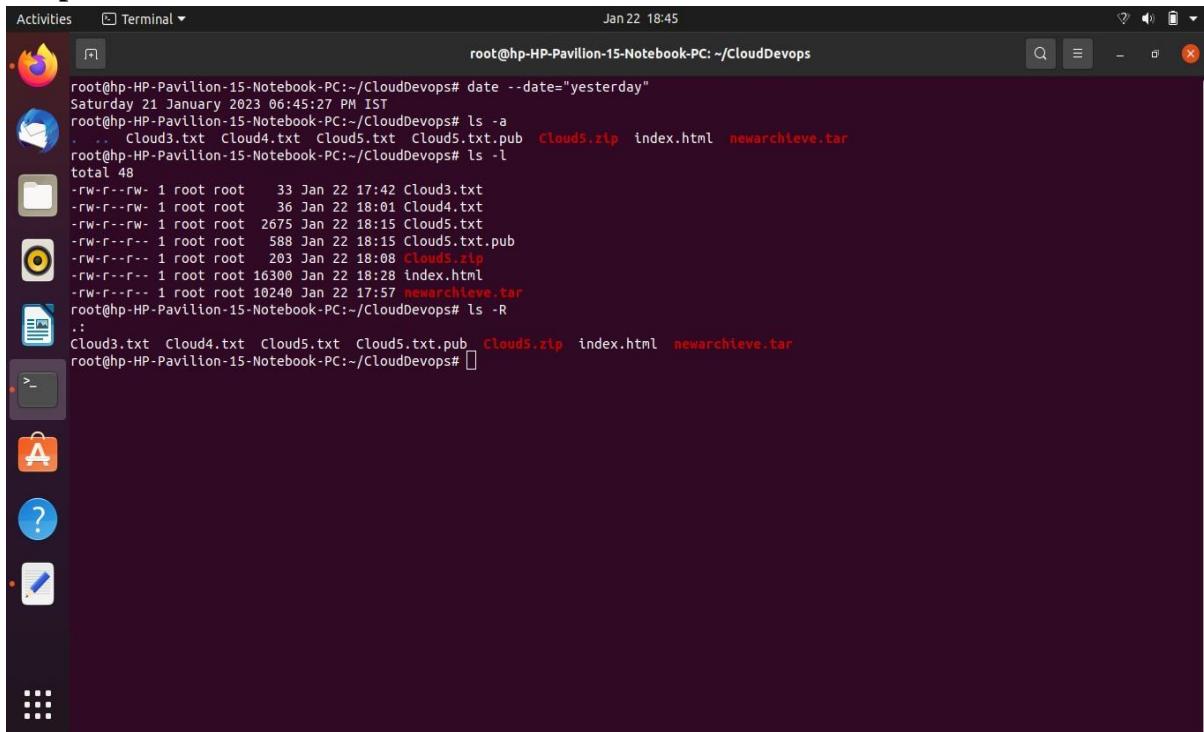
A screenshot of a Linux desktop environment showing a terminal window. The terminal window title is "root@hp-HP-Pavilion-15-Notebook-PC: ~/CloudDevops". The terminal shows the following command and its output:

```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# date --date="yesterday"
Saturday 21 January 2023 06:45:27 PM IST
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -a
.  ..  Cloud3.txt  Cloud4.txt  Cloud5.txt  Cloud5.txt.pub  Cloud5.zip  index.html  newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -l
total 48
-rw-r--rw- 1 root root    33 Jan 22 17:42 Cloud3.txt
-rw-r--rw- 1 root root    36 Jan 22 18:01 Cloud4.txt
-rw-r--rw- 1 root root  2675 Jan 22 18:15 Cloud5.txt
-rw-r--r-- 1 root root    588 Jan 22 18:15 Cloud5.txt.pub
-rw-r--r-- 1 root root    203 Jan 22 18:08 Cloud5.zip
-rw-r--r-- 1 root root 16300 Jan 22 18:28 index.html
-rw-r--r-- 1 root root 10240 Jan 22 17:57 newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops#
```

57) **ls -R** -- used to list information about files and directories within the file system.

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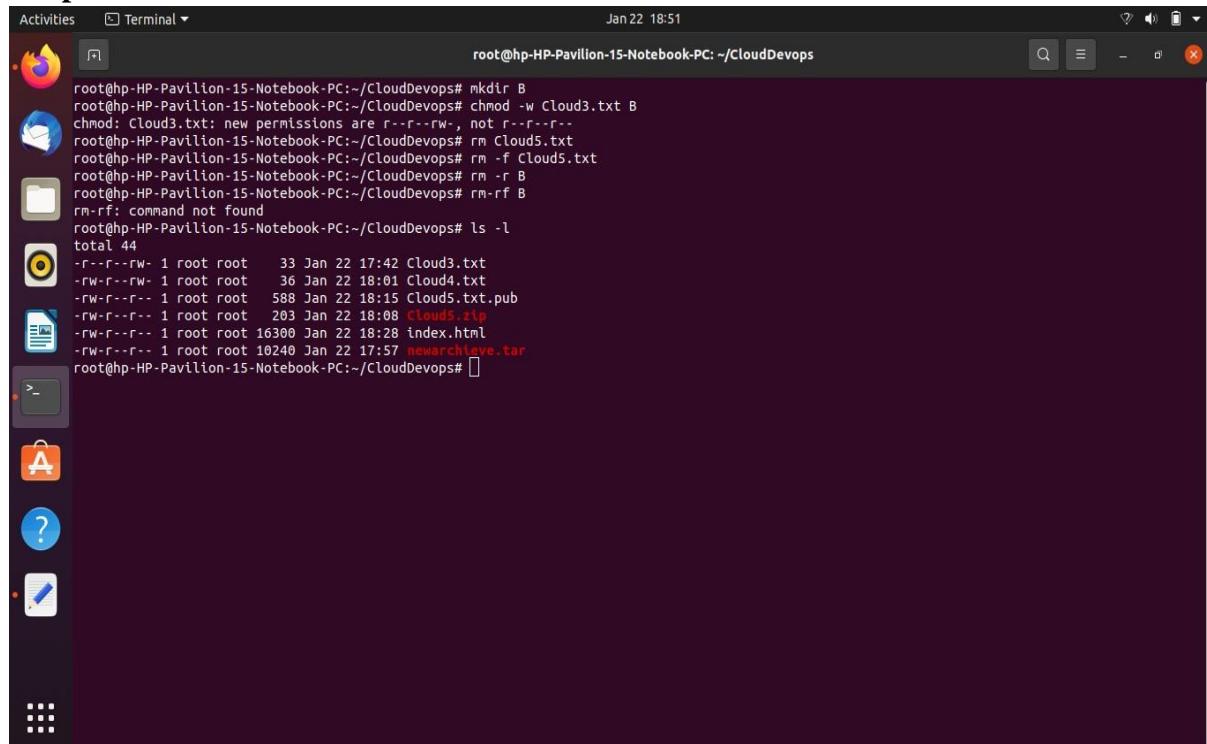
Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# date --date="yesterday"
Saturday 21 January 2023 06:45:27 PM IST
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -a
. .. Cloud3.txt Cloud4.txt Cloud5.txt Cloud5.txt.pub Cloud5.zip index.html newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -l
total 48
-rw-r--rw- 1 root root 33 Jan 22 17:42 Cloud3.txt
-rw-r--rw- 1 root root 36 Jan 22 18:01 Cloud4.txt
-rw-r--rw- 1 root root 2675 Jan 22 18:15 Cloud5.txt
-rw-r--r-- 1 root root 588 Jan 22 18:15 Cloud5.txt.pub
-rw-r--r-- 1 root root 203 Jan 22 18:08 Cloud5.zip
-rw-r--r-- 1 root root 16300 Jan 22 18:28 index.html
-rw-r--r-- 1 root root 10240 Jan 22 17:57 newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -R
.:
Cloud3.txt Cloud4.txt Cloud5.txt Cloud5.txt.pub Cloud5.zip index.html newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# [REDACTED]
```

58) **rm -rf** -- remove directory with the files

Output:-



```
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# mkdir B
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# chmod -w Cloud3.txt B
chmod: Cloud3.txt: new permissions are r--r--rw-, not r--f--r--
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# rm Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# rm -f Cloud5.txt
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# rm -r B
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# rm -rf B
rm:rf: command not found
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# ls -l
total 44
-r--r--rw- 1 root root    33 Jan 22 17:42 Cloud3.txt
-rw-r--rw- 1 root root    36 Jan 22 18:01 Cloud4.txt
-rw-r--r-- 1 root root   588 Jan 22 18:15 Cloud5.txt.pub
-rw-r--r-- 1 root root   203 Jan 22 18:08 Cloud5.zip
-rw-r--r-- 1 root root 16300 Jan 22 18:28 index.html
-rw-r--r-- 1 root root 10240 Jan 22 17:57 newarchive.tar
root@hp-HP-Pavilion-15-Notebook-PC:~/CloudDevops# []
```